**Presubmission Inquiry**

Dear Dr. North,

I am writing to inquire if our manuscript, titled “Dynamic Predictive Templates in Perception,” would be suitable for submission to Current Biology.

Our study investigates the computational mechanisms of false alarms. False alarms, where participants perceive stimuli that are not present, share key features with hallucinations and therefore serve one of the most influential experimental models for studying the symptoms of psychotic disoders such as schizophrenia. So far, however, two key questions have remained unanswered: First, to serve as a valid proxy for hallucinations, false alarms need to be more than just erroneous reports of a signal, but reflect perceptual experiences that have identifiable content. Second, false alarms should occur at a timescale that is compatible with the temporal dynamics of hallucinations.

In this work, we solve these questions in a novel analytical paradigm that combines Hidden Markov Models with a classification image approach. We demonstrate that false alarms are more likely to occur during an internal mode of perception—a state where the content of perception is heavily biased by previous experiences. Our findings reveal that:

1. False alarms are driven by predictive templates, which are formed based on prior experiences and distort the perception of noisy inputs into perceiving signals.
2. These predictive templates fluctuate over time, reflecting the dynamic nature of hallucinatory experiences. Our study shows that the internal mode, which is associated with a higher rate of false alarms, alternates with the external mode at a timescale compatible with the duration of hallucinations.

We believe our work will be of significant interest to the readers of Current Biology, as it provides a novel mechanistic understanding of how perceptual experiences are shaped by past stimuli and how this process relates to hallucinations in psychosis. Our findings suggest new avenues for therapeutic strategies aimed at mitigating hallucinatory experiences by targeting the neural mechanisms underlying the internal mode of perception. We propose this manuscript as a Report, but one that could easily fit within the space confines of a Correspondence, if needed

All associated materials, including data and code, are available on GitHub (<https://github.com/veithweilnhammer/modes_ketamine_scz>), ensuring full transparency and reproducibility of our research. We propose this manuscript as a Report, but one that could easily fit within the space confines of a Correspondence, if needed. As potential reviewers, we suggest the following experts: Anissa Abi-Dargham, David Burr, Guido Marco Cicchini  Paul Fletcher, Karl Friston, Guillermo Horga, Hakwan Lau, Pascal Mamassian, Theofanis Panagiotaropoulos, Megan Peters, and Helen Slagter.

Thank you for considering our inquiry. We look forward to your response.

Sincerely,

Veith Weilnhammer, Yuki Murai, and David Whitney