Rethinking food reward

Current and traditional models of ingestive behavior implicate the consciously perceived hedonic qualities of food as driving overeating, whereas subliminal signals arising from the gut serve to curb our uncontrolled desire for calories. However, recent evidence suggests that the inverse is true. More specifically, evidence from human and animal models will be presented demonstrating that it is the subliminal metabolic signals that ascend to the brain to regulate food reinforcement. Critically, emerging work also shows that diet can induce adaptations in the gut-brain axis pathways that impacts metabolism, reinforcement, perception, and a variety of dopamine-dependent functions.