Jennifer Hurley

Richard Baruch M.D. Career Development Chair at Rensselaer Polytechnic Institute
Troy, NY, US

Investigating fundamental mechanisms underlying the circadian clock and health implications of a disrupted clock.

Biography

Jennifer M. Hurley, the Richard Baruch M.D. Career Development Chair, is an expert on the fundamental mechanisms underlying circadian rhythms, which are controlled by a central oscillator, or clock. Defects in the circadian clock or disruptions in circadian rhythms are linked to a wide range of sleep, metabolic and psychological disorders in humans. Hurley?s lab investigates the relationship between the core clock mechanism and the output that the clock controls using a combination of molecular genetics and biochemical techniques as well as a biostatistical/computational approach using whole genome scale data. In a recent finding, Hurley?s work demonstrated that macrophages, immune cells that seek and destroy intruders like bacteria, may time daily changes in their responses to pathogens and stress through the circadian control of metabolism. Earlier findings have drawn fascinating insights into links between circadian rhythms and malaria and diabetes, and the discovery that environmental toxins can disrupt circadian rhythms in simple organisms.

Areas of Expertise

Ecology, Protein Structure / Function Relationships, Macrophages, Circadian Rhythms, Neurospora, Immunology, Systems Biology

Education

Rutgers/UMDNJ
Ph.D. Molecular Genetics, Microbiology and Immunology

Dartmouth
P.Ph.D. Genetics and Biochemistry

Juniata College
B.S. Molecular Biology and Politics