

Gene Block, PhD

Gene Block's area of scientific expertise is biological clocks. His research has focused on the neurobiology of circadian rhythms, specifically the neural mechanisms by which organisms adjust sleep and wakefulness to the day and night cycle. Most recently, he has examined the effects of aging on the biological clock.

From 1991 to 2002, he directed the National Science Foundation's Science and Technology Center in Biological Timing, which was based at the University of Virginia. The center's research led to a breakthrough in the understanding of the molecular and neural mechanisms involved in biological timing. Through the work of the center, the University of Virginia became a world leader in circadian biology research.

Gene Block has published more than 100 scientific papers, chapters and reviews, and has organized more than 30 scientific meetings. He has served on scientific advisory boards at the University of Pennsylvania, University of Pittsburgh, Emory University, Morehouse School of Medicine, University of Maryland and University of Alaska, Fairbanks.

Gene Block is a fellow of the American Association for the Advancement of Science and was a visiting fellow of the Japanese Society for the Promotion of Science. In April 2010, he was elected to the American Academy of Arts and Sciences.

Selected recent publications

Lundkvist GB, Sellix MT, Nygard M, Davis E, Straume M, Kristensson K, Block GD. Clock gene expression during chronic inflammation induced by infection with *Trypanosoma brucei* in rats. *J Biol Rhythms*. 2010;25(2):92-102.

Nakamura TJ, Sellix MT, Kudo T, Nakao N, Yoshimura T, Ebihara S, Colwell CS, Block GD. Influence of the estrous cycle on clock gene expression in reproductive tissues: effects of fluctuating ovarian steroid hormone levels. *Steroids*. 2010;75(3):203-12.

Nakamura TJ, Sellix MT, Menaker M, Block GD. Estrogen directly modulates circadian rhythms of PER2 expression in the uterus. *Am J Physiol Endocrinol Metab*. 2008;295(5):E1025-31.

Davidson AJ, Sellix MT, Daniel J, Yamazaki S, Menaker M, Block GD. Chronic jet-lag increases mortality in aged mice. *Curr Biol*. 2006;16:R914-R916.

Lundkvist GB, Kwak K, Davis E, Tei H, Block GD. A calcium flux is required for circadian rhythm generation in mammalian pacemaker neurons. *J Neurosci*. 2005;25:7682-7686.