

# 東京大学グローバル COE 特別セミナー

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## 理学系研究科 生物化学専攻セミナー

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演者 : **Nirao Shah**, MD, PhD  
University of California, San Francisco



演題 : Sex, genes, and videotape:  
Representation of gender in the brain

日時 : 平成 22 年 10 月 19 日 (火) 17 : 00 ~ 18 : 00

場所 : 東京大学理学部 3 号館 4 階 416 号室

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All sexually reproducing animals have evolved gender differences in behavior that are characteristic of the species. These sex differences are most obvious in behaviors related to sexual behavior, territorial aggression, marking, and parental care. In mice, as in humans, these sexually dimorphic behaviors are profoundly influenced by sex hormones produced by the testes and ovaries. I will present our recent findings indicating that estrogen may control the masculine behavioral repertoire in mice. By contrast, testosterone signaling is not essential for masculinizing the behavioral repertoire; rather, this hormone amplifies the display of male behaviors established by estrogen. These findings will be related to discrete differentiation events in the developing brain and to specific neural pathways that are likely to control sexually dimorphic behaviors. Finally, I will present molecular and genetic findings that suggest a surprisingly modular control of individual sex differences in behaviors.

### References

Junitti S.A. et al. *Neuron* **66**, 260-272 (2010)

Wu M.V. et al. *Cell* **139**, 61-72 (2009)

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