



王忠信

中央研究院生物多樣性研究中心助研究員

代表作名稱：

- ★ Y.C. Huang, and J. Wang*. "Did the Fire Ant Supergene Evolve Selfishly or Socially?" *BioEssays: News and Reviews in Molecular, Cellular and Developmental Biology* 36.2 (2014): 200-208.
- ★ J. Wang*, Y. Wurm*, M. Nipitwattanaphon, O. Riba-Grognuz, Y.C. Huang, D. Shoemaker, and L. Keller*. "A Y-like Social Chromosome Causes Alternative Colony Organization in Fire Ants." *Nature* 493.7434 (2013): 664-668.

得獎簡評：

王忠信博士致力於紅火蟻社會型態的遺傳表現，發現紅火蟻不同的社會型態，事實上是透過約 600 個「鎖」在一起的「超級基因」進行調控。這個發現是根據王博士幾年來利用遺傳分析描繪出火蟻社會結構的多態性，並依循細胞遺傳學及基因體解析來證明這個「超級基因」，最重要的是，王博士指出超級基因所在之染色體，其特性與人類的兩種性染色體 X 與 Y 十分相近。王博士從遺傳學的觀點，證實動物社會行為與遺傳的關係，這也是首例發現動物的社群染色體決定其行為差異，對社會及演化生物學有極大的影響。

得獎人簡歷：

John Wang joined the Biodiversity Research Center, Academia Sinica as an Assistant Research Fellow in 2010. His laboratory studies the genetics and genomics of ants with the broader goal of understanding social biology and social evolution. His group is also studying non-Mendelian inheritance systems. John received his B.S. from the Ohio State University and Ph.D. from Stanford University. He did his postdoctoral research at the University of Lausanne in Switzerland.



代表作簡介：

Intraspecific variability in social organization is common, yet the underlying causes are seldom known. Fire ants provide one of the rare cases where variation in social organization, *i.e.*, single-queen versus multi-queen colonies, has been demonstrated to be under genetic control. We and collaborators showed that this genomic region is actually a non-recombining ‘supergene’ of ~600 genes residing on a ‘social chromosome’ having many characteristics of sex chromosomes. This is the first example of a social chromosome regulating social structure in animals.

得獎感言：

I am very honored to receive this award. I would like to thank my Ph.D. and postdoctoral advisors, Stuart Kim and Laurent Keller, for their mentorship and training; Academia Sinica and the Biodiversity Research Center for providing an excellent research environment; the members of my laboratory for their enthusiasm and great efforts; and my family for their support.