

## グローバル COE 特別セミナー

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演題: Boredom and excitement: Genetic analysis of  
neural circuit development and function  
in zebrafish

日時: 平成20年7月23日(水) 16:00~17:00

場所: 東京大学(本郷)理学部 2号館 2F 201号室

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要旨:

Forward genetic analysis of behavior in zebrafish can be useful for identification of genes important for neural circuit development and function. Normally tactile stimulation induces vigorous escape swimming in zebrafish embryos. In *ennui* mutants (boredom in French) touch initiates only weak swimming due to aberrant localization of acetylcholine receptors on skeletal muscles. This phenotype is caused by a mutation in a member of the low-density lipoprotein receptor family. Another mutation is the touch unresponsive *touchdown* mutation (the apex of excitement in American football) that arises from mutations in the gene encoding for a member of the Transient Receptor Potential family of membrane channels. *touchdown* mutants fail to respond to light touch, but respond to various forms of noxious stimuli. Our analysis suggests that the *touchdown* gene is a component of the physiological pathway responsible for transduction of nonpainful, tactile stimuli.

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