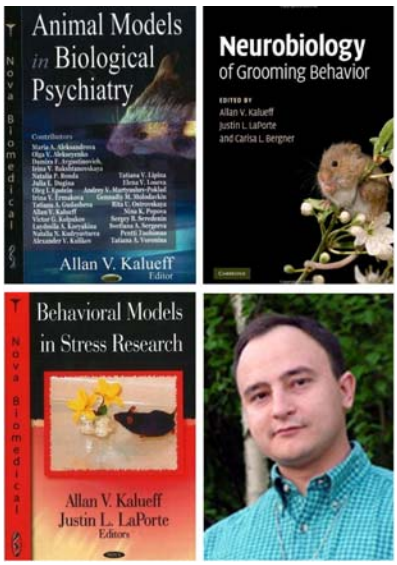
po＜国際セミナー（精神生物学分野）： Allan V Kalueff 博士　講演　のご案内＞

日時場所： 2010 年 6 月 9 日、午後 5:30-6:30、小金井ｷｬﾝﾊﾟｽ 11 号館 5 階　多目的会議室



様々なストレス環境の中に生きる人間にとって、精神の健やかさを支える科学は 21 世紀の重要課題の一つです。Allan V Kalueff 先生は精神生物学的アプローチにより、精神疾患に関する基礎研究および著作活動を、米国およびロシアなどで活発に続けています。　米国・国立精神保健研究所（NIMH/NIH）で不安症などの研究を経て、現在、米国 Tulane 大学及び George Town 大学にて研究室を主宰しています。このたび、本学との学生交流の強いご希望に基づき、皆様と活発な議論を期待し、種を超えた精神疾患・生物モデル開発への取り組みなどについてご講演を下さる運びとなりました。学内外の皆様にご参集頂けます様、ご案内申し上げます。

（連絡先：東京農工大学　小柴満美子　koshiba@cc.tuat.ac.jp）

The developing utility of adult zebrafish in modeling neuropsychiatric disorders

Allan V Kalueff, PhD (physiology), PhD (anatomy) Tulane University, New Orleans, USA
http://kalueffflab.com/moreinfoavk.html

Although zebrafish (*Danio rerio*) has long been one of the most promising new model species for neuroscience research, the potential of the zebrafish as a model in behavioral research has emerged only recently. Adult zebrafish was chosen as a model for our lab's research because they offer robust neurophenotypes and an important evolutionary insight into the animal behavioral responses. Zebrafish are a relatively complex vertebrate species, physiologically homologous to other vertebrates, and possessing all of the ‘classical’ vertebrate neurotransmitters. Physiological endpoints, such as stress hormone levels, can be a valuable supplement to the behavior seen during observation. In zebrafish, the hypothalamus-pituitary-interrenal axis (HPI) is fundamental to stress response and involves a cascade of hormones from corticotropin releasing hormone (CRH) to adrenocorticotropic hormone (ACTH) and cortisol. It is interesting to note that zebrafish, like humans, employ cortisol (rather than corticosterone, as do rodents) as a primary stress response hormone, which makes them a useful animal model relevant to human stress physiology and biopsychology. Recently, we have developed a simple and effective method of measuring zebrafish physiological stress responses (based on a human salivary cortisol assay), and showed that alterations in whole-body cortisol levels in zebrafish parallel behavioral indices of stress. By combining results from behavioral, physiological, and genomic measures, the researchers are able to develop a more complete model of the interactions among and between elements at each level of analysis. In summary, the neurobiology and patterns of zebrafish emotional behavior remain poorly understood. However, it is likely that zebrafish emotional behavior is driven by the same evolutionarily ancient ‘core’ neurobiological mechanisms and pathways that regulate emotional behavior in other vertebrate species, including humans. Here I will present our lab's research aiming to (1)Investigate how zebrafish express their emotionality into behavior; (2) Record and quantify these behaviors using data-dense video-tracking analyses and multi-dimensional modeling; (3) Examine physiological (neuroendocrine) correlates of zebrafish behavior; (4) Translate zebrafish behavior into human neuropsychiatric and neurological disorders, such as anxiety, drug abuse, epilepsy and drug neurotoxicity.