

## 若手大学人育成イニシアチブセミナー

日時：2010年2月15日 PM2:00~PM3:00 会場：総合D棟 一階115号室

演題：**Histone Acetylation: A New Twist in the Chromosome Cycle**

演者：**Alain Verreault 博士**

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要旨：**Histone H3 lysine 56 (H3 K56) acetylation takes place in newly synthesised histones that are deposited throughout the entire genome during each passage through S-phase. This histone modification is both cell cycle- and DNA damage-regulated. In the absence of DNA damage, H3 K56 acetylation is normally removed following S-phase by nicotinamide adenine dinucleotide (NAD<sup>+</sup>)-dependent deacetylases, but it persists in response to DNA damage during S-phase. This novel feature of the chromosome cycle plays an important role in the DNA damage response. Both the acetylation and, to an even greater extent, the deacetylation of H3 K56 profoundly affect the ability of cells to survive clinically relevant cancer chemotherapeutic agents that damage DNA during replication. H3 K56 acetylation therefore emerges as a genome-wide histone modification whose ubiquitous presence behind replication forks “somehow” prevents the formation of cytotoxic lesions near sites of replication fork damage.**

Alain Verreault 博士は染色体DNA損傷の修復に関与するクロマチン中のヒストン修飾の研究の分野で著名である。今回は博士の最新の研究成果について、海外のクロマチン研究の最新の動向も交えて紹介していただく。

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