



EPIGENETICS SEMINAR

Title: Focus on Chromatin

Speaker: Sarantis Chlamydas, Ph.D., Product Manager at Active Motif

Active Motif is a global biotech company based in the USA and focused on epigenetics research. Since its establishment in 1999, Active Motif has launched a wide range of innovative tools to help researchers elucidate the mechanism of epigenetic events. Currently, we provide antibodies against chromatin modifications, chromatin immunoprecipitation (ChIP) kits, and Epigenetics Services. In ChIP services, we processed 12,000+ samples comprising 15+ organisms, 25+ tissues in addition to various cultured and native cells, and 350+ targets over the ~10 years of history.

This seminar focuses on recent advances in ChIP-Seq (Chromatin immunoprecipitation and DNA sequencing) and its related technologies developed in Active Motif. ChIP-Seq has been instrumental in understanding genome-wide distribution of chromatin proteins and their modifications. However, current standard ChIP-Seq methodologies do not allow quantitative analyses and thus make it difficult to make direct comparisons among different samples (e.g., disease vs normal or treated vs untreated). Active Motif's universal chromatin spike-in strategy is based on *Drosophila melanogaster* chromatin and a *D. melanogaster*-specific antibody introduced into standard ChIP reactions with human chromatin samples. With this approach, we were able to detect dramatic and global reduction of histone H3 lysine 27 trimethylation (H3K27me3) upon inhibition of histone methyltransferase EZH2 in human cells, which was invisible with standard analysis methods.

**Place: Biken Hall, 1st Floor, Main Building,
Research Institute for Microbial Diseases,
Osaka University**

Date: October 3 (Mon), 2016, 16:00–17:00

Language: English

Host: Hodaka Fujii (hodaka@biken.osaka-u.ac.jp)

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