



# QBiC SEMINAR

Speaker	<b>Shuji Ogino, MD, PhD</b> <i>Harvard Medical School, Dana-Farber Cancer Institute</i>
Date & Location	<b>Wednesday, January 16, 2013</b> <b>12:30 - 13:30</b>  OLABB 1F Lounge (6-2-3, Furuedai, Suita, Osaka 565-0874) *There will be a video broadcast in CDB Bldg.D, E-206
Title	<b>Molecular Pathological Epidemiology (MPE): Novel Integrative Science</b>
Abstract	<p>This lecture will explain the novel integrative science “Molecular Pathological Epidemiology (MPE)” as simply as possible, using cancer as an example of complex multifactorial diseases. Although systems biology addresses molecular complexity in given experimental models, a considerable knowledge gap to human diseases in populations exists. To investigate heterogenous disease processes in populations, MPE was recently established (Ogino et al. <i>J Natl Cancer Inst</i> 2010; Ogino et al. <i>Gut</i> 2011; Ogino et al. <i>Nat Rev Clin Oncol</i> 2011). MPE can dissect complex interplay between environmental, dietary and lifestyle factors, molecular alterations, and tumor evolution. The power and promise of MPE are well attested by our recent study (Liao et al. <i>N Engl J Med</i> 2012) on interactive effects of aspirin and tumor PIK3CA mutation on tumor behavior. We have also shown that tumor stroma contributes to tumor cell plasticity to changing microenvironment by targeted treatment (Straussman et al. <i>Nature</i> 2012). MPE is a logical next step of genome-wide association studies (“GWAS-MPE Approach” (Ogino et al. <i>Gut</i> 2011). Other related new concepts include “Unique Tumor Principle” (Ogino et al. <i>Int J Epidemiol</i> 2012; Ogino et al. <i>Expert Rev Mol Diagn</i> 2012) and “Colorectal Continuum” (Yamauchi, et al. <i>Gut</i> 2012). As such, the MPE paradigm facilitates the development of other novel concepts. In summary, a better understanding of heterogeneity of carcinogenic processes and influences of exogenous and endogenous factors can translate into personalized prevention as well as personalized treatment strategy.</p>
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