The 76th iCeMS SEMINAR

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15:30−16:30

演　題：**Molecular Determinants of Human MRP1 and MRP4 Expression**

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The 'C' branch of the ATP-binding cassette (ABC) superfamily comprises 13 membrane proteins, nine of which are known as Multidrug Resistance Proteins. MRP1 is a 'long' MRP with three membrane spanning domains (MSDs), and two nucleotide binding domains (NBDs) while MRP4 is a 'short' MRP because it has only two MSDs. The overlap in the substrate specificities of human MRP1 and MRP4 is very limited but both transporters play important (albeit different) roles in the cellular efflux of physiologically important molecules as well as the tissue disposition/elimination of drugs and their conjugated metabolites. In the case of MRP1, interdomain interactions appear critical for the proper assembly and trafficking to the plasma membrane. In contrast to MRP1, membrane expression of MRP4 is highly dependent on its interactions with various 'scaffolding' proteins. NHERF1/EBP50 is a major determinant of the differential localization (apical vs basolateral) of MRP4 in polarized epithelial cells in tissues such as kidney vs liver.

Iram S and Cole SPC, *J. Biol. Chem*. 286, 7202 (2011)

主　催：京都大学 物質ー細胞統合システム拠点（iCeMS =アイセムス）
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