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# The 74<sup>th</sup> iCeMS SEMINAR

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**Thu 24 March 2011**

**16:30-17:30**

## **Pdr5 — an ABC transporter for all seasons?**

Lecturer: **Prof. Dr. Lutz Schmitt**  
Heinrich Heine University Düsseldorf

Venue: 2nd floor Seminar Room (#A207)  
Main Building, iCeMS Complex 1  
Kyoto University

Multidrug resistance can be a major challenge in the therapy of cancer and pathogenic fungal infections. More than three decades ago, P-glycoprotein was the first multidrug transporter identified, and P-gp has been extensively studied at the genetic and biochemical levels ever since. Pdr5, the most abundant ABC transporter in *Saccharomyces cerevisiae*, is highly homologous to azole-resistance-mediating multidrug transporters in fungal pathogens, and a focus of clinical drug resistance research. Despite functional equivalences, P-gp and Pdr5 exhibit striking differences in their architecture. Here, I will summarize our recent results of mutations that affect substrate selection and transport. These results will be summarized in a model that takes kinetic selection principles into account.

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**Hosted by:** iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University

