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# グローバル COE 特別セミナー

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## 生物化学専攻セミナー

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日時：平成 24 年 3 月 2 日（金） 16:30～17:30

場所：理学部 3 号館 3 階 327 号室

講師：**Dr. Sreekanth H. Chalasani**

Salk Institute for Biological Studies

演題：**Spatial memory in *C. elegans***

要旨：

A central challenge in neuroscience is to understand how neural circuits transform environmental cues into robust behaviors. We use the simple roundworm, *Caenorhabditis elegans* to dissect the genes, cells, synapses and neural circuits driving behavior. We find that when worms are recently removed from food, they search a local area for precisely 15 min by interrupting long forward movements with abrupt turns (“local search”). After 15 min, they leave the local area by suppressing these turns (“global search”). Surprisingly, we observe that the area of the local search area is regulated by the size of the food patch. Interestingly, worms can learn a new patch size in about an hour. Moreover, dopamine and protein synthesis are required for this process.