

演題：**Trafficking of Neuropeptide Y Receptors - and their Applications in Cancer Therapy**

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場所：理学部6号館 204-02室 (Science#6-204-02)

要旨：Future chemotherapy might benefit from targeted delivery of toxic agents to cancer cells, in order to increase their therapeutic index and prevent substantial side effects. These delivery systems generally should consist of three parts: a targeting unit, a linker bond and a toxic agent. The first should be able to discriminate between healthy and cancer cells, therefore ensuring a selective delivery to degenerated tissue. Recently, peptides have been focused as selective carriers owing to the low immunogenicity and high tumor affinity and specificity. Neuropeptide Y (NPY) is a C-terminally amidated 36 amino acid peptide that binds to four different G protein coupled heptahelix receptors. Many of them are overexpressed on tumors, e. g. the hY₁R was found to be overexpressed in more than 90 % of breast tumors and 100 % of breast cancer derived metastases, whereas hY₂R is found on neuroblastoma cells and Y₄R in colon cancer. The concept of peptide shuttles will be shown and examples for tumor imaging, targeting and therapy will be introduced.

本講演は、大学院総合化学院『化学研究先端講義/総合化学特別研究第二』の一部として認定されています。

連絡先：生物化学研究室 坂口 和靖（内線：2698）