

平成 21 年度人間総合科学研究科

最先端医学研究セミナー

第 301 回つくば分子生命科学セミナー

「内在性タンパク質の二分子間相互作用 局在解析に画期的な新技術」

開催日：2009 年 12 月 16 日（水） 17:30～18:20（質疑を含み約 50 分）

会 場：臨床講義室 A

セミナー内容

演題：信号伝達経路可視化のための新ツール

A New Tool for Visualization of Signal Transduction Pathways

演者：Ms. Gabriella Edfeldt, Key Account Manager, Olink Bioscience,
Uppsala, Sweden

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演題概要：

The unique *in situ* Proximity Ligation Assay (PLA™) enables visualization of single protein events such as protein-protein interactions and post-translational modifications in fixed cells or tissue samples. By combining requirement of dual antibody recognition of the target with signal amplification, *in situ* PLA™ technology exhibits both high sensitivity and specificity. The detected targets can be counted by automated software, thereby bringing objectivity to investigations which have previously relied on subjective evaluation.

To understand the dynamics of a given interaction in the development of pathological processes, it is important to study large sets of samples. PLA™ provides an excellent tool for high throughput screening (HTS) of for example, drug candidates or to elucidate interacting partners in complex regulatory pathways.

We present examples using *in situ* PLA™ to obtain clear, high resolution imagery when comparing normal, modified and diseased tissues and cells. We will show data of the complex formation of SMAD proteins after stimulation with TGF- β , a confirmation study of the interaction between VEGF-R2 and PDGF-RB and one study correlating the level of phosphorylation of EGFR in head and neck cancer to the survival of the patients.

The generic approach to *in situ* PLA™ is developed by Olink Bioscience as a commercial product marketed as Duolink® (for more information and references, please visit our website at www.olink.com).

本セミナーは最先端医学セミナーの単位に換算されます。

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