

S29-5 **In vivo tumor imaging with novel fluorescence probes and conclusion of the symposium**

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Fluorescence-based imaging technologies have been frequently used to monitor status and responses of cultured cells and organ slice samples in cell biology field. Recently, these technologies were also utilized for in vivo whole body imaging by using various imaging instruments. One of the advantages of fluorescence-based techniques is that “activatable” probes can be developed which show large signal changes upon reaction or binding with target analytes. Further, sensitivity of fluorescence-based technique is quite high, so visualization of small qualitative changes in living samples can be achieved with high S/N ratio, merely by loading a small quantity of imaging probes. We have succeeded in developing various fluorescence probes which enable tumor imaging in vivo, even if their size are less than 1 mm. In this symposium, I will introduce our recent achievements of in vivo tiny tumor imaging with novel fluorescence-based imaging probes. Also, I will summarize this symposium from the viewpoint of the importance of organic chemistry for the future progress in imaging technologies.