The 58th iCeMS SEMINAR

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PET Probe Development Using Digital Microfluidics

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

The microscale radiolabeling of biologics using a versatile 18F-tag was demonstrated in our digital microfluidic chips. Consuming only small amounts of samples, the optimal conjugation parameters were obtained rapidly by screening individual droplets with different compositions. Batches of products can be then generated from one single droplet to a mouse-dose scale for probe evaluation or/and in vivo studies. Our idea is to create a device capable of preparing various biologics-based, target-specific PET probes on demand, in an automated fashion with minimal operator skill. Our vision is to make PET probes easily accessible so that researchers can study the underlying biology of diseases and, at the same time, clinicians can gather more detailed molecular information about each individual patient before choosing therapeutics and monitor progress after the targeted treatments.







