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Development of microfluidics targeting tumor heterogeneity

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Tumor Heterogeneity refers to biophysical and biochemical differences among individual tumor cells even from the same tumor portions. Currently, the bottlenecks for studying tumor heterogeneity are the lacks of effective tools for single-cell and small-population analysis. In this talk, I will present our recent work on developing microfluidic platforms targeting tumor heterogeneity. Firstly, I will present microfluidic platforms capable of

high-throughput characterizing electrical, mechanical, proteomic and comprehensive properties of single tumor cells. Secondly, I will introduce the newly proposed tools enabling high-throughput analysis of migration and invasion capabilities of small-population cells. Hopefully, the microfluidic tools developed in my group can contribute to our studies of tumor heterogeneity in the near future.

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