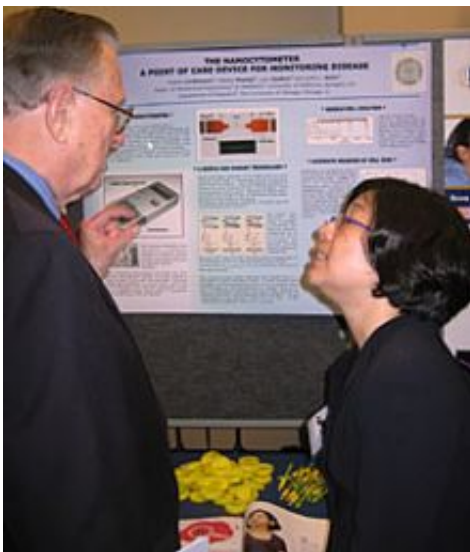


Device could put disease detection in the palm of a hand

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Berkeley associate professor Lydia Sohn (right) explains her nanocytometer to Arden Bement, director of the National Science Foundation, at a Capitol Hill exhibition.

Lydia Sohn, associate professor of mechanical engineering at UC Berkeley, took her show on the road last week with a demonstration of her handheld nanocytometer at a "science fair" for leaders of Congress and the National Science Foundation.

The Coalition for National Science Funding Exhibition, on Capitol Hill, brought together researchers from 16 universities and 40 national scientific and educational associations. Sohn's contribution was her "pore-

on-a-chip" technology, developed with an NSF grant, that makes disease detection at home or in the field an affordable reality. The device is currently in the pipeline for commercial development.

The nanocytometer is a pocket-sized device that can rapidly identify diseases by testing a single drop of blood using an inexpensive disposable cartridge. The cartridges contain a silicon chip laden with artificial nanopores that mimic the filtration system of human cells.

"The nanocytometer lets us work at the intersection of a number of disciplines, from biology and mechanical engineering to solid-state physics and chemical engineering," says Sohn, who developed the device in collaboration with Andrea Carbonaro and Haiyan Huang of UC Berkeley and Lucy Godley of the University of Chicago. The tool has the potential to boost survival chances for leukemia, prostate or breast-cancer patients — particularly where the cancer has recurred — by offering early detection of rare, isolated cancer cells.

Source: UC Berkeley

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