Contact:
Yong Yi, Product Manager
Fluidigm Corporation
Phone: 650.266.6078
Email: yong.yi@fluidigm.com

FLUIDIGM AND BERKELEY LAB AWARDED PHASE II STTR GRANT TO DEVELOP MICROFLUIDIC CHIP FOR *IN SITU* DIFFRACTION OF PROTEIN CRYSTALS

November 20, South San Francisco, CA – Fluidigm Corporation and the Lawrence Berkeley National Laboratory (Berkeley Lab) have received funding from The National Institutes of Health (NIH) to develop a microfluidic chip for collection of *in situ* X-ray diffraction data. The diffraction-capable chip will be designed so that protein crystals can be screened at a synchrotron without having to first remove them from the chip. The new technology will allow researchers to identify the best crystals for diffraction experiments using actual X-ray data rather than relying on qualitative measures, such as visual inspection. This chip-based method will eliminate the need to manipulate crystals prior to data collection, a step that often results in mechanical damage to the fragile crystals.

The ultimate goal of protein crystallography is to construct a detailed representation of the atomic structure of the protein. This knowledge is basic to understanding its biological function in an organism and may guide the development of new drugs. "In this tight funding environment, receiving an STTR [Small Business Technology Transfer] phase II grant attests to the value that the NIH places on our crystallization technology," said Fluidigm CEO Gajus Worthington. Fluidigm pioneered the field of microfluidic, or chip-based, protein crystallization, marketed as the TOPAZ® system.

The grant includes funding for instrument modifications at the synchrotron facility, where scientists would send the diffraction-capable chips containing intact crystals. Diffraction data will be collected from every experiment in the chip and then deposited on-line. This preliminary diffraction data will allow users to focus their efforts on the crystallization conditions that produce the best diffracting crystals, providing a tremendous savings in time and cost.

Fluidigm scientist Dr. Andrew May and Berkeley Lab scientist Dr. James Holton are principal investigators on the grant, which represents Phase II of the project, and spans from proof of concept to a commercially viable product. Completion of the work is expected within two years. "X-ray diffraction data is the only objective way to determine the quality of protein crystals. This chip will provide routine access to that data much earlier in the structure determination process than is currently possible," added Dr. May.

About Berkeley Lab

Berkeley Lab is a U.S. Department of Energy national laboratory located in Berkeley, California. It conducts unclassified scientific research and is managed by the University of California. Visit our website at http://www.lbl.gov.

About Fluidigm

Fluidigm Corporation develops and distributes systems based on the unique properties of integrated fluidic circuits (IFCs) to precisely control fluids on a nano-volume scale. The company's vision is to create and to lead a new industry in which IFCs bring unparalleled efficiencies to the life science and allied fields. Based in South San Francisco, California, the Company is privately held and backed by premier investors: Versant Ventures, Euclid SR Partners, InterWest Partners, Alloy Ventures, Lehman Brothers Healthcare Fund, the Singapore EDB, Bruce Burrows, Lilly BioVentures, the Invus Group, SightLine Partners, AllianceBernstein and GE Equity.

# # #