



A	Monolithic microfluidic quartz chip
B	Thermo-regulated 14-port manifold
C	14-valves interface and thermo-regulated reservoir bank
D	System controller with umbilical link
E	Programmable graphic user interface for automation
F	Flow cytometer module – 2 lasers (488 nm and 635 nm) and 5 detection channels (scattering + GFP, YFP, Cy5, Cy7 fluorescence)

Supplemental Figure 2. Integrated Microfluidic Platform, the premixed 5% CO₂ is directly plumbed into the valve setup shown in C. The temperature controller (not shown) connects the chip and manifold (A and B) to the system controller (D). The graphic user interface (E) allows for user programming and hands-free operation of the entire experiment from dosing to sample preparation, to analysis.