

**Abstract:**

The Cell Analysis Facility (CAF), a core facility of the University of Nebraska Medical Center (UNMC), is requesting \$581,998.00 to purchase a high end flow cytometer for the analysis of multi-parametric research samples. This instrument is a 6 laser, 19 detector LSRII flow cytometer manufactured by BDBioscience to our specifications. The existing LSRII is 100% subscribed and is the only analysis instrument in the laboratory available for experiments utilizing more than 6 simultaneous parameters in the area. The instrument is without backup. Delays in data acquisition occur frequently as the instrument is in high demand from both basic science and clinical research programs. Down time for this instrument, though rare, could have disastrous implications for these investigators. Secondly, the addition of new laser excitation lines will expand the capabilities of the CAF allowing many new fluorescent probes to be excited/detected. The instrument will be housed and managed by the CAF with Dr. Kuszynski and his staff providing dedicated support. The investigators listed herein have both NIH and corporate funded projects which are expected to continue while use of the instrument is expected to increase their competitiveness for additional funding. Current users of the LSRII number 31, who will benefit from the new instrument. Addition of this instrument to the CAF will foster advances in the areas of regenerative medicine, translational research, neuroscience and cancer biology as well as further basic research in immunology, microbiology and AIDS. Discoveries in these areas will lead to better treatments, cures and outcomes for patients.