**BCA assay reagents**

Reagent A: 8 gm sodium carbonate monohydrate, 1.6 gm sodium tartrate, brought to 100 ml with distilled water. Adjust the pH to 11.25 with 10 M NaOH.

Reagent B: 4 gm BCA in 100 ml distilled water.

Reagent C: 0.4 gm cupric sulfate (5 x hydrated) in 10 ml water.

Working solution: Mix 1 volume reagent C with 25 volumes reagent B, then add 26 volumes reagent A to the C/B mixture.

The primary risks associated with lentiviral work occur during virus production (transfection) and the handling of concentrated virus, where accidental needlesticks or splashes could expose personnel to recombinant vectors. However, the lentiviral system used is second-generation and designed to be replication-incompetent, lacking essential genes (env, vpu, nef, etc.). Thus HIV exposure is only theoretically possible through three separate recombination events between the packaging, envelope, and transfer vectors, which could restore replication competence, but the actual probability oft this occurring is less than 1 in 10^8 in transduced cells in research settings. Also, the vectors employed in the lab are self-inactivating, which would eliminate replication competence recombination were to occur. Moreover, standard biosafety practices—including use of personal protective equipment (gloves, goggles), work within Class II biosafety cabinets, and decontamination with 10% bleach—further reduce the risk. Regulatory agencies such as the NIH and OSHA consider the use of properly pseudotyped, replication-incompetent lentiviral vectors to be safe under BSL-2 containment.

The Cellnsight CX7 is a high-content imaging instrument that we will use to characterize our small molecule libraries for selective effects in our engineered immortalized cancer cell lines (proliferation, cell death, cell cyle, etc.). The opentrons instrument is a liquid handling device for robotic dispensing of our small molecule libraries in multiwell plates using the CX7 instrument. phenotypic screening, toxicity assays, and other cell-based assays. See "Research Description" section for implementation of these instruments.