Flow Analyzers:

1. Cytek Aurora: Acquired in 2025, this is the first full spectrum analyzer in BCCHR Flow Core. The Aurora is equipped with 5 lasers (355nm, 405nm, 488nm, 561nm, and 638nm) which measures fluorescence in 64-channels across five Avalanche-Photodiodes (APDs) detector arrays, good for detecting longer wavelength fluorescence. It is also able to subtract cellular auto-fluorescence. The system has 3 modes (tube, tube rack and built-in plate loader) to accommodate assay flexibility. The computer workstation running SpectroFlo software for sample acquisition and data analysis.
Trained users can schedule via Calendars>Flow Cytometry>Analyzers>Cytek Aurora Analyzer at https://bcch-cts.calpendo.com

2. BD FACSSymphony A1: Made in 2021, this cytometer is equipped with 4 lasers (405nm, 488nm, 561nm, 637nm lasers) and has 16 fluorescence detectors. It comes with a high throughput sampler (HTS) - automated injection of samples from 96 plates. It utilizes BD FACSDiva™ Software for streamlined workflow from system setup to data acquisition and/or analysis.
Trained users can schedule via Calendars>Flow Cytometry>Analyzers>Symphony A1 at https://bcch-cts.calpendo.com

3. BD FACSSymphony A5: The system was a special order acquired in 2017. It has been installed with 200 mW laser power for 405nm, 488nm, 561nm, and 640nm lasers, and 65 mW for UV laser (355nm). It is equipped with 28 color detectors with configuration 5Blue-3Red-8Violet-7UV-5YG. The instrument utilizes BD FACSDiva™ Software for streamlined workflow from system setup to data acquisition and/or analysis.
Trained users can schedule via Calendars>Flow Cytometry>Analyzers>Symphony A5 at https://bcch-cts.calpendo.com

4. BD LSRFortessa X-20: Acquired in 2014, originally a special ordered cytometer to feature 4 lasers (405nm, 488nm, 561nm, 640nm) with 20 parameters. In May 2021, it was updated by adding a new UV laser and a high throughput sampler (HTS) system. The current configuration is 2Blue-3Red-4YG-6Violet-3UV. The instrument utilizes BD FACSDiva™ Software for streamlined workflow from system setup to data acquisition and/or analysis.
Trained users can schedule via Calendars>Flow Cytometry>Analyzers>Fortessa at https://bcch-cts.calpendo.com

5. Beckman Coulter Cytoflex: Acquired in 2016 as a replacement for the FACS Canto. The system features 3 lasers (405nm, 488nm, 640nm) and up to 13 color detection. Its configuration is 5Blue-3Red-5Violet. It has built-in 96-well plate loader module that accepts U, V or flat bottom plates. The instrument utilizes CytExpert software which can display data with 7 logs of dynamic range.
Trained users can schedule via Calendars>Flow Cytometry>Analyzers>CytoFlex at https://bcch-cts.calpendo.com

Flow Sorters:

1. **Cytek Aurora CS:** Acquired in 2025, this is the full spectrum sorter in BCCHR Flow Core. The cell sorter is installed in a Class II Biological Safety Cabinet. The instrument is equipped with:

- Lasers: 355nm, 405nm, 488nm, 561nm, and 640nm lasers with 64 fluorescence detectors;

- Nozzles:70 μm, 85 μm, 100 μm and 130 μm;
- Collection: 1-6 ways sorting into 1.5ml Eppendorf tube, 5ml and 15ml collection tubes or into 6/24/96 well plate

The sorter is installed with advanced sorting features and camera monitoring tools using SpectroFlo CS software to isolate target cells for downstream studies.

Users can schedule via Calendars>Flow Cytometry>Cell sorters>Cyteck Aurora CS at https://bcch-cts.calpendo.com

2. BD FACSAria Fusion: Made in May 2020, it is a recent addition to the core. The cell sorter is installed in a Class II Biological Safety Cabinet. The instrument is equipped with:
- Lasers: 405nm, 488nm, 561, and 640nm lasers with 16 color detectors;
- Nozzles:70 μm, 85 μm, 100 μm;
- Collection: 1-4 ways sorting into 1.5ml Eppendorf tube, 5ml and 15ml collection tube or into 6/24/96 well plate

The sorter uses BD FACSDiva™ Software to efficiently control the setup, acquisition, analysis and sorting from the operator workstation.

Users can schedule via Calendars>Flow Cytometry>Cell sorters>FACS Fusion at https://bcch-cts.calpendo.com