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| **Facilities and Resources** |

**UCSF CoLabs**

**The Genomics CoLab:** The Genomics CoLab on the 8th floor of the medical science building with ~1900 square feet of lab space with 12 lab benches 12 desks. This space is part of a larger shared wet lab with the Disease to Biology (D2B) CoLab that combined totals approximately 3800 square feet. The space also includes two support rooms for large equipment. Shared areas include space for cell culture rooms, freezers, refrigerators, liquid nitrogen tanks, chemical hoods, incubators, water baths and microscopes. Bench top equipment in the Genomics CoLab includes all the requirements for standard genomic assays, such as centrifuges, micro centrifuges, tube spinners and more. The Genomics CoLab currently operates three 10x Genomics Chromium controls (one V1 and two NextGem) and one Chromium X controller. Additional spatial transcriptomics equipment includes the 10x Genomics CytAssist to enable the Visium platform, plus a 10x Genomics Xenium and a Nanostring CosMX. The D2B CoLab also shares two additional 10x Genomics Chromium controls. Genomics CoLab space also houses a BioMek i7, an STP LapTech Mosequito HV, four BioRad C1000 Touch thermocyclers with multiple 96 and 384 well modules and four other 96 well thermocyclers, nanodrop 8000, Qubit 2.0 Fluorometer Agilent Fragment Analyzer and Illumina MiniSeq system.

The Genomics CoLab also has been dedicated approximately 1250 square feet of a total of 2500 square feet of shared office space. This is ample space to support two full time bioinformatic programmers supporting the NGS studies, and three workstations for visiting scientists from collaborative groups. The shared office space also houses the Data Science CoLab and the CoLabs Administrative Team. The CoLabs Administrative team includes a Chief Administrative Officer, a Chief Strategist, and a Financial Analysist supporting all CoLab activities. The Data Science team is a group of approximately 8 computational scientists and software engineers focused on designing data storage, analysis and sharing tools to support collaborative projects. Shared CoLabs spaces also include two small huddle rooms for meetings with two to three people, and a larger conference room for group meetings of eight to ten.

The Genomics CoLab has two servers contained within its office spaces, each with 12-24 cores, 128 GB RAM, and large RAID arrays, and have been configured with the latest bioinformatic tools, such as STAR, 10x Genomic Cellranger, R Studio Server, Seurat, Macs and more. Computers and servers are connected to a campus-wide local area network, which in turn is connected via a high-speed microwave link to the Internet. Access to remote computer facilities, such as the NSF-sponsored supercomputer centers, is also available via this Internet link. Computational resources also include personal laptop computers and exclusive access to a dedicated compute node (54 core, 756 GB RAM, 24 TB RAID) and storage node (120 TB RAID) owned by the Genomics CoLab and housed at the UCSF Helen Diller Family Comprehensive Cancer Center (HDFCC) Computational Biology and Informatics (CBI) Shared Resource cluster (<http://cbi.ucsf.edu/hpc/>) and supported by dedicated staff at the CBI. All UCSF researchers also have access to shared compute clusters including the Wynton cluster (https://wynton.ucsf.edu) and the HDFCC CBI Shared Resource cluster.

Dr. Eckalbar directs the Genomics CoLab and has a 150 sq. ft. office on the 8th floor of the Medical Science Building adjacent to his laboratory. Dr. Eckalbar has administrative support in the forms of an administrative assistant, financial analyst, research services analyst, purchasing officer, and human resources manager.

**Other Core Facilities**

The Genomics Core (GCF) at the Mt. Zion campus is available to sequence libraries generated at the Eckalbar lab or the Genomics CoLab. The GCF includes multiple TECAN Genesis 8-probe robotic sample processors, Matrix Technologies Hydra II 96-probe and Hamilton 12-probe and 96-probe MICROLAB 4200 liquid handling robots for setting up sequencing assays, and the PerkinElmer EnVision multilabel plate reader platform for DNA quantitation. The GCF currently has strong next-generation sequencing capability (2 Illumina NovaSeq 6000, 1 Illumina HiSeq 4000, 3 Illumina HiSeq 2500 sequencers, and 2 Illumina MiSeq sequencers, Life Technologies SOLiD and Ion Torrent sequencers).

The Center for Advanced Technology (CAT) is located at the Mission Bay campus and provides access and training for its equipment which cover areas in next-generation sequencing. The majority of the equipment is free for use and researchers are only responsible reagent costs. Major sequencing equipment at the CAT includes a Illumina NovaSeq X and a NovaSeq 6000. The core also has substantial equipment for larger scale and high throughput projects.

The Parnassus Garage for Advaned Technologies (PCAT) is a facility provides access to shared instrumentation for cell biology and molecular biology studies. The PCAT offers equipment for high throughput experiments and next-generation sequencing library preparation quality control, including an Illumina MiniSeq and Agilent Bioanalyzer.