**Laboratory:** The **USF Genomics Equipment Core** laboratory facilities are on the 3rd floor of the Interdisciplinary Research Building (IDRB) in the USF Research Park. The ~3000 sq. ft. BSL2 laboratory space is equipped for cell biological and molecular biological experiments. The USF Genomics Core facility offers/encourages one-on-one consultation with a team of experienced bench and computational scientists on experimental design, sample preparation and data analysis for USF researchers. Certified users can reserve time in the Core to complete sample preparation and sequencing with Core staff available to assist as needed. The USF Genomics Equipment Core is a cost center and utilizes iLab (core management software) to manage requests, reservations, and billing.

The USF Genomics Core laboratory facilities house the following instrumentation: *Next-Gen Sequencers:* Illumina NextSeq-550 and MiSeq systems, 10x Chromium Single-Cell Controller.

*Instrumentation for sample library-prep and quality-assurance:* Covaris M220 for DNA framentation, Agilent 4200 and 2200 TapeStation systems, Roche LightCycler Real-Time qPCR system, Invitrogen Qubit 2.0 fluorometer, and BioRad PCR systems.

*Instrumentation for cell culture:* Three four-foot class II biosafety cabinets, four mixed-gas incubators, two Leica microscopes, one Eppendorf 5810 centrifuge.

These facilities are additionally fully equipped with refrigerators, -20°C and -80°C freezers, thermocyclers, bench top centrifuges, heatblocks, and vortexers.

**Computational:** The USF Genomics Core computational facilities are on the 4th floor of the IDRB and comprise a 1400+ sq. ft. computational suite shared with Genomics Program members in addition to private offices. The Genomics Program offers computational support and consulting through its **USF Omics Hub**, a core group of PhD-level laboratory and computational biologists with extensive and varied experience with omics experiments from the bench to data-analysis. Hub consultants run many Mac, Linux and Dell workstations and have access to USF’s High-Performance Computing (HPC) clusters and a variety of both proprietary and open-source analysis software. Additional details are available at http://rc.usf.edu. HPC infrastructure and hardware supporting USF Genomics and the USF Genomics Core Facility is managed by the USF Department of Research Computing.

*Data storage and analysis:* Data to be generated and analyzed by the Core are securely stored on a 1000-core HIPAA-compliant cluster, and Genomics Program researchers have priority access to HPC and a 9152-core general-computation cluster with multi-core servers located in the on-campus datacenter. The total of 419 nodes have a memory of 46,228 GB RAM. The nodes in the cluster are connected with either a QDR InfiniBand fabric (older hardware) or an Intel Omnipath fabric (newer hardware) for computations as well as a separate Ethernet-management network. All nodes in the clusters are connected (over either QDR Infiniband or Omnipath) to a 2.1~PB GPFS system or a 300 TB BeeGFS system (dedicated to the HIPAA-compliant cluster). The HPC clusters also have close to 100 nodes outfitted with Nvidia GPU resources with a total of 222 GPUs in production.

**Genomics Training Courses and consultation:** The USF Genomics Program offers both laboratory- and computational- workshops for Next-Gen sequencing and data analysis through the **USF Genomics Equipment Core** facility and the **Omics Hub**. The Hub are additionally available for consultations to support project-planning, experimental design, and cost estimates, as well as longer-term collaboration on funded projects.