

### Major Instruments and Instrument Systems In the Keck Laboratory

Resource	Description	Manufacturer/Model	Qty
Amino Acid Analysis	Amino Acid Analyzer: Ion Exchange	Hitachi L8900A-PH	1
Biophysics	Fluorescence Polarization System	PanVera BEACON System	1
	Spectrofluorometer	SLM 8000C	1
	Stopped Flow Absorption/Fluorescence Kinetics	Applied Photophysics Limited SX.18MV	1
	HPLC SEC/Laser Light Scattering System (SEC/LS)	Waters' HPLC & PDA UV/Vis/Wyatt DAWN MALLS & QELS LS & Optilab rEX RI Detectors	1
	Dynamic Light Scattering Detector (DLS)	DynaPro 800 Proterion Corp.	1
	Isothermal Microcalorimeter (ITC)	MicroCal VP-ITC	1
	Surface Plasmon Resonance Sensor (SPR)	GE HealthCare/BiaCore 1000	1
	Asymmetric Flow, Field-Flow Fractionation & Light Scattering System (AFFF/LS)	Agilent HPLC & PDA & FL, Wyatt Eclipse 3 AFFF, HELEOS II MALLS and QELS & Optilab rEX RI Detectors	1
DNA Sequencing	SPR	GE HealthCare/BiaCore T100	1
	DNA Sequencer: 96 Capillary	Applied Biosystems 3730XL	3
	Biorobot	Tecan Genesis RSP 150	1
Biomedical High Performance Computing Center	Biorobot	Beckman Coulter Biomek NX MC	1
	Bulldogi Compute Cluster (680 cores = CPU, 170 nodes)	Dell PowerEdge 1955 blades	1
	Bulldogc Compute Cluster (260 cores = CPU, 130 nodes)	Dell PowerEdge 1855 blades	1
	30 TB SAN Storage Device	EMC CX-500	1
	31 TB Disk Array Storage Device	Satabeast	1
	SMP server (8 cores = CPU)	Dell PowerEdge 6850	1
	Scalemp SMP (48 cores = CPU)	F1240	1
Keck ITS	10 TB Lustre Filesystem Storage	N/A	1
	Compute Cluster (Dual CPUs, 5 nodes)	Dell PowerEdge 2850 (Master) & 1850 (Compute) Nodes	1
Mass Spectrometry & Proteomics	MALDI TOF/TOF MS	ABI 4800	1
	LC-Electrospray/Quadrupole/TOF MS	Waters capLC/Micromass Q-ToF API	1
	LC-Electrospray/Quadrupole/TOF MS	Waters cap LC/Micromass Q-ToF Micro	1
	LC-Electrospray/Quadrupole/TOF MS	Dionex Ultimate Nano HPLC/ABI-Star XL	1
	LC-Electrospray/Quadrupole/TOF MS	Dionex Ultimate Nano HPLC/ABI Q-Star Elite	1
	LC-Electrospray/LTQ-Orbitrap Mass Spectrometer (MS)	Waters nano-Acquity UPLC/Thermo Fisher LTQ-Orbitrap	1
	LC-Electrospray/LTQ-Orbitrap Mass Spectrometer (MS)	Waters nano-Acquity UPLC/Thermo Fisher LTQ-Orbitrap XL	1
	LC-Electrospray/LTQ-Orbitrap Mass Spectrometer (MS)	Waters nano-Acquity UPLC/Thermo Fisher LTQ-Orbitrap Velos	1
	LC-Electrospray/APCI Qtrap	Waters nano-Acquity UPLC/ABI 4000 Qtrap	1
	LC-Electrospray/APCI Qtrap	Waters nano-Acquity UPLC/ABI 5500 Qtrap	1
	LC-Electrospray FT-ICR MS	Bruker Daltonics 9.4T Apex Qe FT-ICR	1
	LC/Sample Prep Workstation	Vision Work Station	1
	LC/MALDI-MS Sample Spotter	Dionex LC-MALDI Sample Collection Module	1
	BioRobot	Micromass MASSPrep	1
	HPLC Systems: Analytical	Hewlett Packard 1090 & 1100	2

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	2D Chromatofocussing/RP HPLC Protein Profiling System	Beckman Coulter Proteome Lab PF2D Protein Fractionation System	1
	Differential Fluorescence 2D Gel Protein Profiling System	Amersham Typhoon 9410 Scanner	1
		Amersham ETTAN Gel Spot Picker	1
		Amersham ETTAN TM Gel Digester	1
Microarray	Hybridization Oven	Affymetrix 640	3
	Fluidics Station	Affymetrix 400	3
	Scanner	Affymetrix 7G	1
	Micro-electrophoresis Bioanalyzer	Agilent 2100	2
	Spectrophotometer	Nanodrop	1
	IScan Scanner with Autoloader	Illumina	1
	BeadArray Scanner with Autoloader	Illumina	2
	Tecan Robot	Illumina	2
	Sequenom MassArray	Sequenom	1
	Sequenom Liquid Handler	Sequenom	1
	MauI Hyb ovens	MauI	3
	Biorobot	Qiagen 9600	2
	Biorobot	Robbins Hydra-96 Microdispenser with Twister H Plate Stacker	1
	Biorobot	Matrix Technologies Tango Liquid Dispenser	1
	Glass Slide Microarray Scanner	Axon GenePix 4000A, 2 fluor Capability	1
	Glass Slide Microarray Scanner	Perkin Elmer ScanArray 5000, 16 fluors	1
	Resonance Light Scattering Microarray Reader	Qiagen HiLight Reader	1
	Gel Imaging/Documentation System	BioRad Gel Doc	1
	Spectrophotometer	Hitachi GeneSpec II	1
	Quantitative PCR Machine	Applied Biosystems 7900	1
Oligo Synthesis	Oligo Synthesizer: 4 Column/Parallel	Applied Biosystems 394	10
	Oligo Synthesizer: 96 Well Based/Parallel	GeneMachines Polyplex	1
	Oligo Synthesizer: 48 Column/Parallel	Applied Biosystems 3900 DNA Synthesizer	3
	Capillary Electrophoresis System	Beckman P/ACE MDQ	3
	Spectrophotometer	Perkin Elmer Lambda 3	1
	Microplate Absorbance Reader	SpectraMax Plus	1
Peptide Synthesis: Large Scale	tBoc Peptide Synthesizer: 3 Vessel/Sequential	Applied Biosystems 430A	3
	HPLC Systems: Preparative	Waters 3000	2
	HPLC Systems: Analytical	Waters 510 & 6000	2
Peptide Synthesis: Small Scale	MALDI/TOF Mass Spectrometer	Micromass M@LDI-L/R	1
	Multiple Peptide Synthesizer: 12 Vessel/Parallel	Rainin Symphony	3
	HPLC Systems: Preparative	Waters' 600E	3
	HPLC Systems: Analytical	Varian Prostar, HP1100, Rainin Dynamax	3
Protein Sequencing	Protein/Peptide Sequencer	Applied Biosystems Procise 494	1
<b>Total Instruments and Instrument Systems</b>			<b>110</b>