

DaCCoTA
Cross-Institutional
Scientific & Translational
Resource Guide

DaCCoTA
DAKOTA CANCER COLLABORATIVE
ON TRANSLATIONAL ACTIVITY

Updated March 2021

Table of Contents

Introduction	3
Flow Sorting and Analysis	4
Cell Isolation and Preparation.....	5
Nucleic Acid Extraction/ Preparation.....	6
Nucleic Acid Library Prep	7
Confocal Microscopy.....	8
Brightfield/ Widefield Fluorescence	9
High Throughput Screening/ Imaging.....	10
Histology	11
Nucleic Acid Analysis.....	12
Behavior	13
Cellular Analysis	14
Chromatography	15
Centrifuges.....	16
Other	17

Introduction

This DaCCoTA Cross-Institutional Scientific & Translational Resource Guide (Resource Guide) provides a list of the research equipment available at partnering DaCCoTA institutions. Additional information can be obtained using the website and email links provided under equipment listings.

The Resource Guide denotes whether the equipment is available for self-service or not. Please note that some equipment may offer both options.

Self-Service: Yes: Equipment is available for self-service use. Self-service is available with training and guidance provided by core personnel, as need.

Self-Service: No. Equipment services are provided by the core/institution.

Note: This document is updated annually or upon submission of new information by institutions. If you find inaccurate information, please email daccota@und.edu. If you are the contact listed and have updated information to provide, please email daccota@und.edu.

Flow Sorting and Analysis

Equipment	Core	Location
BD FACS LSRFortessa SORP	Flow Cytometry Core	Sanford Research
BD FACSJazz	Flow Cytometry Core	Sanford Research
BD Accuri C6 Flow Cytometer (2)	Flow Cytometry Core	Sanford Research
Millipore Guava EasyCyte 8HT	Flow Cytometry Core	Sanford Research

Workstations and Software: Two workstations, installed with FlowJo, FCSEXPRESS, CFlow, MS Office, Guava Soft and Modfit LT, are accessible with or without network connection.

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Alexei Savinov, MD, PhD (Alexei.Savinov@SanfordHealth.org)

Pilar de la Puente, PhD (Pilar.Puente@SanfordHealth.org)

Equipment	Core	Location
BD Accuri C6 Flow Cytometer	Chemistry & Biochemistry	North Dakota State University

After a training session with the CBF Technician on the Accuri C6 Flow Cytometer, anyone will be able to use it independently.

Self Service: Yes

Usage Fee: Contact Core for more information, [Core Biology Facility: Center for Protease Research](#)

Contact: Amber Chevalier Plambeck, PhD (amber.chevalier@ndsu.edu)

Cell Isolation and Preparation

Equipment	Core	Location
Evos inverted Fluorescence microscope	Flow Cytometry Core	Sanford Research
MACS tissue dissociator	Flow Cytometry Core	Sanford Research
MACS bead separator	Flow Cytometry Core	Sanford Research
Tecan Fluent for PBMC isolation	Flow Cytometry Core	Sanford Research
Q700 sonicator	Functional Genomics Core	Sanford Research
Precellys 24 tissue homogenizer	Functional Genomics Core	Sanford Research
BeadBug homogenizer	Functional Genomics Core	Sanford Research

Workstations and Software: two workstations, installed with FlowJo, FCSExpress, CFlow, MS Office, Guava Soft and Modfit LT, are accessible with or without network connection.

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Alexei Savinov, MD, PhD (Alexei.Savinov@SanfordHealth.org)

Pilar de la Puente, PhD (Pilar.Puente@SanfordHealth.org)

Bioinformatics Support Available: Gene expression and pathway analysis of microarray and RNA-seq data, RNA-seq, and scRNA-seq data, comprehensive analysis of ChIP-seq data including motif annotation and differential binding between conditions, and DNaseq data analysis including whole genome and whole exome (WGS) and (WES).

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Kamesh Surendran, PhD (Kameswaran.Surendran@SanfordHealth.org)

Michael Kareta, PhD (Michael.Kareta@SanfordHealth.org)

Nucleic Acid Extraction/ Preparation

Equipment	Core	Location
Promega Maxwell 16 MDx	Functional Genomics Core	Sanford Research
Thermo Savant SPD111V SpeedVac	Functional Genomics Core	Sanford Research
Thermo ND-2000 Spectrophotometer	Functional Genomics Core	Sanford Research
Epoch Take 3 Plate Reader/Spectrophotometer	Functional Genomics Core	Sanford Research
Amaxa Nucleofector	Functional Genomics Core	Sanford Research
Life Technologies Bench Pro 2100	Functional Genomics Core	Sanford Research
GE NanoVue Spectrophotometer	Functional Genomics Core	Sanford Research
Thermo NanoDrop Lite Spectrophotometer	Functional Genomics Core	Sanford Research
Life Technologies Neon MPK5000	Functional Genomics Core	Sanford Research
Biorad GenePulser	Functional Genomics Core	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information, [Functional Genomics and Bioinformatics Core | Sanford Research \(sanfordhealth.org\)](#)

Contact: Kamesh Surendran, PhD (Kameswaran.Surendran@SanfordHealth.org)
Michael Kareta, PhD (Michael.Kareta@SanfordHealth.org)

Equipment	Core	Location
Beckman DU-530 Spectrophotometer	Core Biology Facility	North Dakota State University
QIAcube Automatic Nucleic Acid Purification System	Core Biology Facility	North Dakota State University
Thermo Nanodrop 2000c	Core Biology Facility	North Dakota State University

Self Service: Yes

Usage Fee: Contact Core for more information, [Core Biology Facility : Center for Protease Research](#)

Contact: Amber Chevalier Plambeck, PhD (amber.chevalier@ndsu.edu)

Nucleic Acid Library Prep

Equipment	Core	Location
Agilent 2100 Bioanalyzer	Functional Genomics Core	Sanford Research
10X genomics Chromium	Functional Genomics Core	Sanford Research
Covaris ME-220	Functional Genomics Core	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Kamesh Surendran, PhD (Kameswaran.Surendran@SanfordHealth.org)

Michael Kareta, PhD (Michael.Kareta@SanfordHealth.org)

Equipment	COore	Location
Agilent 2100 Bioanalyzer	Core Biology Facility	North Dakota State University

Self Service: Yes

Usage Fee: Contact Core for more information, [Core Biology Facility : Center for Protease Research](#)

Contact: Amber Chevalier Plambeck, PhD (amber.chevalier@ndsu.edu)

Confocal Microscopy

Equipment	Core	Location
Nikon A1R	Histology and Imaging Core	Sanford Research
Nikon A1	Histology and Imaging Core	Sanford Research
Olympus FV1000	Histology and Imaging Core	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information, [Histology and Imaging Core | Sanford Research \(sanfordhealth.org\)](#)

Contact: Indra Chandrasekar, PhD (Indra.Chandrasekar@SanfordHealth.org)

Self Service: No

Usage Fee: Contact Core for more information, [Histology and Imaging Core | Sanford Research \(sanfordhealth.org\)](#)

Contact: Chun-Hung Chan, PhD (Chun-Hung.Chan@SanfordHealth.org)

Equipment	Core	Location
Zeiss LSM 510 Meta	Imaging Core	University of North Dakota

Self Service: Yes

Usage Fee: Contact Core for more information, [Imaging Core | University of North Dakota \(und.edu\)](#)

Contact: Bryon Grove, PhD (bryon.grove@und.edu)

Equipment	Core	Location
Ziess LSM 900	None	North Dakota State University

Self Service: Yes

Usage Fee: Contact for more information, [Pharmaceutical Sciences | School of Pharmacy | NDSU](#)

Contact: Sijo Mathew Ph.D. (sijo.mathew@ndsu.edu)

Equipment	Core	Location
Olympus Fluoview FV1000	Imaging Core	University of South Dakota

Self Service: Yes

Usage Fee: Contact for more information, [Imaging Core | USD](#)

Contact: Scott Pattison (Scott.Pattison@usd.edu)

Brightfield/ Widefield Fluorescence

Equipment	Core	Location
Nikon NiE (2)	Histology & Imaging Core	Sanford Research
Olympus IX71	Histology & Imaging Core	Sanford Research
Olympus BX51	Histology & Imaging Core	Sanford Research
StereoInvestigator system	Histology & Imaging Core	Sanford Research
Nikon SMZ-1000	Histology & Imaging Core	Sanford Research
Leica Aperio Slide Scanner	Histology & Imaging Core	Sanford Research
Nikon SMZ-800	Animal Resource Center	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Indra Chandrasekar, PhD (Indra.Chandrasekar@SanfordHealth.org)

Self Service: No

Usage Fee: Contact Core for more information

Contact: Chun-Hung Chan, PhD (Chun-Hung.Chan@SanfordHealth.org)

Equipment	Core	Location
Motic, Easy Scan digital slide scanners	NDSU Advanced Imaging And Microscopy	North Dakota State University
OMNI, integrated full HD digital microscope	NDSU Advanced Imaging And Microscopy	North Dakota State University
Zeiss Axio Observer Microscope (inverted) w/ LSM700 scanner	NDSU Advanced Imaging And Microscopy	North Dakota State University
Zeiss AxioImager M2 fully motorized upright microscope	NDSU Advanced Imaging And Microscopy	North Dakota State University
Zeiss, Lumar V12 stereo motorized microscope	NDSU Advanced Imaging And Microscopy	North Dakota State University
Zeiss, Laser Microdissection and Pressure Catapulting System	NDSU Advanced Imaging And Microscopy	North Dakota State University

Self Service: Yes

Usage Fee: Contact Core for more information, [Advanced Imaging & Microscopy Laboratory \(ndsu.edu\)](http://AdvancedImaging&MicroscopyLaboratory.ndsu.edu)

Contact: Pawel Borowicz, PhD (pawel.borowicz@ndus.edu)

Self Service: No

Usage Fee: Contact Core for more information, [Advanced Imaging & Microscopy Laboratory \(ndsu.edu\)](http://AdvancedImaging&MicroscopyLaboratory.ndsu.edu)

Contact: Pawel Borowicz, PhD (pawel.borowicz@ndus.edu)

High Throughput Screening/ Imaging

Equipment	Core	Location
Thermo CellInsight CX7	Histology & Imaging Core	Sanford Research
BioTek Cytation 3	Biochemistry Core	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Indra Chandrasekar, PhD (Indra.Chandrasekar@SanfordHealth.org)

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Kyle Roux, PhD (Kyle.Roux@SanfordHealth.org)

Equipment	Core	Location
GE Typhoon 9410 Variable Mode Imager	Proteomics Core	University of South Dakota
Waters Synapt G1 High Definition Mass Spectrometer	Proteomics Core	University of South Dakota

Self Service: No

Usage Fee: Contact Core for more information, [Proteomics Core | USD](#)

Contact: Eduardo Callegari (Eduardo.Callegari@usd.edu)

Equipment	Core	Location
BioTek Synergy H1 microplate reader	Core Biology Facility	North Dakota State University

Self Service: Yes

Usage Fee: Contact Core for more information, [Core Biology Facility : Center for Protease Research](#)

Contact: Amber Chevalier Plambeck, PhD (amber.chevalier@ndsu.edu)

Histology

Equipment	Core	Location
Ventana Slide Stainer	Histology & Imaging Core	Sanford Research
Sakura TissueTek III Embedder	Histology & Imaging Core	Sanford Research
Cryostat (2)	Histology & Imaging Core	Sanford Research
Microtome	Histology & Imaging Core	Sanford Research
Leica ASP300 Tissue processor	Histology & Imaging Core	Sanford Research

Self Service: No

Usage Fee: Contact Core for more information

Contact: Chun-Hung Chan, PhD (Chun-Hung.Chan@SanfordHealth.org)

Equipment	Core	Location
Electron Microscopy Sciences Lynx II	Histology Core	University of North Dakota
Hamamatsu NanoZoomer 2.0HT Digital Slide Scanning System	Histology Core	University of North Dakota
Leica Autostainer XL	Histology Core	University of North Dakota
Leica Rotary Microtome RM2125 RTS	Histology Core	University of North Dakota
Leica CM 3050S Cryostat	Histology Core	University of North Dakota
Leica CM 1520 Cryostat	Histology Core	University of North Dakota
Leica HistoCore Arcadia H - Paraffin Dispenser	Histology Core	University of North Dakota
Leica HistoCore Arcadia C - Cold Plate	Histology Core	University of North Dakota

Self Service: Yes

Usage Fee: Contact Core for more information, [Histology Core | University of North Dakota \(und.edu\)](#)

Contact: Beth Ann DeMontigny (elizabeth.demontigny@und.edu)

Self Service: No

Usage Fee: Contact Core for more information, [Histology Core | University of North Dakota \(und.edu\)](#)

Contact: Beth Ann DeMontigny (elizabeth.demontigny@und.edu)

Equipment	Core	Location
ADC HybEZ Hybridization System	NDSU Advanced Imaging And Microscopy	North Dakota State University
Leica RM2255 Microtome	NDSU Advanced Imaging And Microscopy	North Dakota State University

Self Service: Yes

Usage Fee: Contact Core for more information, [Advanced Imaging & Microscopy Laboratory \(ndsu.edu\)](#)

Contact: Pawel Borowicz, PhD (pawel.borowicz@ndus.edu)

Nucleic Acid Analysis

Equipment	Core	Location
Biorad MyCycler (2)	Functional Genomics Core	Sanford Research
ABI GeneAmp 9700 (2)	Functional Genomics Core	Sanford Research
ABI 7500 realtime PCR	Functional Genomics Core	Sanford Research
BioRad CFX96	Functional Genomics Core	Sanford Research
Biorad CFX384	Functional Genomics Core	Sanford Research
Biorad Chemidoc MP (2)	Functional Genomics Core	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Kamesh Surendran, PhD (Kameswaran.Surendran@SanfordHealth.org)

Michael Kareta, PhD (Michael.Kareta@SanfordHealth.org)

Equipment	Core	Location
Thermo iBright FL 1500 imaging system	Core Biology Facility	North Dakota State University
Thermo QuantStudio 7 Flex Real-Time PCR	Core Biology Facility	North Dakota State University

Self Service: Yes

Usage Fee: Contact Core for more information, [Core Biology Facility : Center for Protease Research](#)

Contact: Amber Chevalier Plambeck, PhD (amber.chevalier@ndsu.edu)

Behavior

Equipment	Core	Location
Barnes maze- mouse	Experimental Therapeutic Screening Facility	Sanford Research
BASi Force Plate Actometers	Experimental Therapeutic Screening Facility	Sanford Research
SciiVet ABC	Experimental Therapeutic Screening Facility	Sanford Research
Optometry testing system	Experimental Therapeutic Screening Facility	Sanford Research

Self Service: No

Usage Fee: Contact Core for more information, [Experimental Therapeutics Screening Facility | Sanford Research \(sanfordhealth.org\)](https://www.sanfordhealth.org/experimental-therapeutics-screening-facility)

Contact: Chun-Hung Chan, PhD (Chun-Hung.Chan@SanfordHealth.org)

Equipment	Core	Location
Custom Open Field	Behavioral Core	University of South Dakota
Custom T-Maze	Behavioral Core	University of South Dakota
Med Associates Operant Conditioning Chambers	Behavioral Core	University of South Dakota
Med Associates Conditioned Place Preference/Light-Dark Box	Behavioral Core	University of South Dakota
Noldus Custom Radial Arm Maze	Behavioral Core	University of South Dakota
Noldus Custom Elevated Plus Maze (rat and mouse)	Behavioral Core	University of South Dakota
Noldus Custom Water Maze (rat and mouse)	Behavioral Core	University of South Dakota
Noldus Ultra IR Sensitive Monochrome Camera	Behavioral Core	University of South Dakota
Noldus Ultra IR Sensitive filter and light - XIRL-AT8S	Behavioral Core	University of South Dakota
Stoelting Porsolt forced swim chambers	Behavioral Core	University of South Dakota
Stoelting Rotorod for rats or mice	Behavioral Core	University of South Dakota
Tobii Pro TX300 Screen-Based Eye Tracker	Behavioral Core	University of South Dakota

Self Service: No

Usage Fee: Contact Core for more information, [Behavioral Core | USD](https://www.usd.edu/behavioral-core)

Contact: Jamie Scholl (jscholl@usd.edu)

Taylor Bosch (taylor.bosch@usd.edu)

Cellular Analysis

Equipment	Core	Location
Luminex LX100	Biochemistry Core	Sanford Research
Seahorse XFe-24	Biochemistry Core	Sanford Research
Nicoya OpenSPR	Biochemistry Core	Sanford Research
ACEA xCelligence	Biochemistry Core	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information, [Biochemistry Core | Sanford Research \(sanfordhealth.org\)](#)

Contact: Kyle Roux, PhD (Kyle.Roux@SanfordHealth.org)

Equipment	Core	Location
Dell Precision 5820	Imaging Core	UND Biomedical Sciences

Self Service: Yes

Usage Fee: Contact Core for more information, [Imaging Core | University of North Dakota \(und.edu\)](#)

Contact: Bryon Grove, PhD (bryon.grove@und.edu)

Chromatography

Equipment	Core	Location
Agilent GC/MS	Biochemistry Core	Sanford Research
Dionex Ultimate 3000 HPLC	Biochemistry Core	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information, [Biochemistry Core | Sanford Research](#) (sanfordhealth.org)

Contact: Kyle Roux, PhD (Kyle.Roux@SanfordHealth.org)

Equipment	Core	Location
GE Akta FPLC	Proteomics Core	University of South Dakota
Thermo Ultimate RSLC3000 Ultra-High Performance Liquid Chromatography System	Proteomics Core	University of South Dakota
Waters 1D and 2D nanoAcquity Ultra Performance Liquid Chromatography	Proteomics Core	University of South Dakota

Self Service: No

Usage Fee: Contact Core for more information, [Proteomics Core | USD](#)

Contact: Eduardo Callegari (Eduardo.Callegari@usd.edu)

Centrifuges

Equipment	Core	Location
Sorvall RC6 Plus (2)	Shared Equipment	Sanford Research
Sorvall WX80	Shared Equipment	Sanford Research

Self Service: Yes

Usage Fee: Contact Core for more information

Contact: Chun-Hung Chan, PhD (Chun-Hung.Chan@SanfordHealth.org)

Equipment	Core	Location
Thermo SPD1010 Integrated SpeedVac	Proteomics Core	University of South Dakota

Self Service: Yes

Usage Fee: Contact Core for more information, [Proteomics Core | USD](#)

Contact: Eduardo Callegari (Eduardo.Callegari@usd.edu)

Other

Equipment	Core	Location
Visual Sonics Vevo 2100	Shared Equipment	Sanford Research
Rad Source RS2000	Shared Equipment	Sanford Research

Self Service: No

Usage Fee: Contact Core for more information

Contact: Chun-Hung Chan, PhD (Chun-Hung.Chan@SanfordHealth.org)

Equipment	Core	Location
Denton Desk II and Turbo Sputter Coaters	Imaging Core	University of North Dakota
Hitachi 4700 Field Emission SEM	Imaging Core	University of North Dakota
Hitachi 7500 TEM	Imaging Core	University of North Dakota
Olympus FV1000 MPE	Imaging Core	University of North Dakota
Olympus IX83 TIRF	Imaging Core	University of North Dakota
RCM MTX Ultramicrotome	Imaging Core	University of North Dakota
Thermo Q Exactive Orbitrap	Mass Spectrometry	University of North Dakota
Thermo TSQ 9000	Mass Spectrometry	University of North Dakota
Waters Synapt G2s/UPLC	Mass Spectrometry	University of North Dakota
Waters Xevo TQ-S Mass Spectrometer	Mass Spectrometry	University of North Dakota

Self Service: Yes/ No

Usage Fee: Contact Core for more information, [Imaging Core | University of North Dakota \(und.edu\)](http://Imaging Core | University of North Dakota (und.edu))

Contact: Bryon Grove, PhD (bryon.grove@und.edu)

Self Service: No

Usage Fee: Contact Core for more information, [Mass Spectrometry | University of North Dakota \(und.edu\)](http://Mass Spectrometry | University of North Dakota (und.edu))

Contact: Mikhail Golovko, PhD (mikhail.golovko@med.und.edu)

Equipment	Core	Location
Bio-Rad ProteomeWorks Spot Cutter	Proteomics Core	University of South Dakota
Expedeon GELFREE 8100 Fractionation System	Proteomics Core	University of South Dakota
Invitrogen Zoom IEF Fractionator	Proteomics Core	University of South Dakota
Manifold & vacuum pump	Proteomics Core	University of South Dakota
Packard MassPrep Workstation Multiprobe II	Proteomics Core	University of South Dakota
Thermo Scientific Q Exactive Plus	Proteomics Core	University of South Dakota
Surgical Station, Lab Animal	Physiology Core	University of South Dakota
Live Animal Imaging Station	Physiology Core	University of South Dakota
Necropsy Station, Lab Animal	Physiology Core	University of South Dakota
VisualSonic Vevo 2100 Ultrasound Imaging System	Physiology Core	University of South Dakota
Leica M165FC	Imaging Core	University of South Dakota
Zeiss Axiovert 200M Inverted Epifluorescent Microscope	Imaging Core	University of South Dakota
Zeiss Upright M-1 Imager	Imaging Core	University of South Dakota
Advanced Brain Monitoring, B-Alert X24 Wireless Electroencephalography System	Human Functional Imaging Core	University of South Dakota

g.tec g.GAMMAcap2 64 Channel Passive Electroencephalography System	Human Functional Imaging Core	University of South Dakota
g.tec g.GAMMAcap2 128 Channel Active Electroencephalography System	Human Functional Imaging Core	University of South Dakota
Magstim BiStim2 Transcranial Magnetic Stimulation System	Human Functional Imaging Core	University of South Dakota
Magstim Rapid2 Transcranial Magnetic Stimulation System	Human Functional Imaging Core	University of South Dakota
Rogue Research Brainsight TMS Neuronavigation System	Human Functional Imaging Core	University of South Dakota
Siemens 3T Skyra Wide Bore Magnetic Resonance Imaging System	Human Functional Imaging Core	University of South Dakota
Soterix MxN-5 High Definition Transcranial Electrical Stimulation System	Human Functional Imaging Core	University of South Dakota

Self Service: Yes/No

Usage Fee: Contact Core for more information, [Proteomics Core | USD](#)

Contact: Eduardo Callegari (Eduardo.Callegari@usd.edu)

Self Service: Yes/No

Usage Fee: Contact Core for more information, [Physiology Core | USD](#)

Contact: Jessica Freeling (Jessica.Freeling@usd.edu)

Self Service: Yes

Usage Fee: Contact Core for more information, [Imaging Core | USD](#)

Contact: Scott Pattison (Scott.Pattison@usd.edu)

Self Service: No

Usage Fee: Contact Core for more information, [Human Functional Imaging Core | USD](#)

Contact: Taylor Bosch (taylor.bosch@usd.edu)

Equipment:	CORE:	Location:
Visual Sonic FUJIFILM VisualSonics Vevo Imaging Systems	Animal Core Facility	North Dakota State University

Self Service: Yes

Usage Fee: Contact Core for more information, [Animal Core Facility | Center for Diagnostic and Therapeutic Strategies in Pancreatic Cancer | NDSU](#)

Contact: Jiyan Mohammad (jiyan.mohammad@ndsu.edu)