

# BADGER CONNECT RESEARCH SERVICES FAIR

Wednesday, November 9 • 11:30 am-4:30 pm

Health Sciences Learning Center - Main Atrium • 750 Highland Avenue

Designed for all life science researchers across  
the UW-Madison campus

## Invited Research Talk

12:00-12:45 pm, Room 1335 HSLC

Automating cell type classification by  
leveraging transcriptomic big data

By Colin Dewey, PhD, Professor,  
Dept. of Biostatistics & Medical Informatics,  
UW School of Medicine and Public Health

*Presentation includes lunch*



## Panel Discussion

12:55-1:45 pm, Room 1335 HSLC

Managing and Supporting Big Data and Data Pipelines

Participating cores include:

- Flow Cytometry Lab
- Cancer Informatics Shared Resource
- Translational Science Biocore
- Survey of the Health of Wisconsin
- Circulating Biomarker Core
- Bioinformatics Resource Center

## Workshops

2:00-3:15 pm,

Rooms 1222, 1229, 1244 HSLC

## Networking Reception

3:15-4:30 pm, Atrium

Light refreshments and drinks provided

### Hosted by:

UW Carbone Cancer Center,  
UW School of Medicine and Public  
Health and UW Biotech Center

To learn more and to register for FREE:  
[cancer.wisc.edu/research/badgerconnect](http://cancer.wisc.edu/research/badgerconnect)

Questions?

[badgerconnect@cancer.wisc.edu](mailto:badgerconnect@cancer.wisc.edu)



# BadgerConnect 2022 Research Services Fair

November 9<sup>th</sup>, 2022

11:30 AM – 4:30 PM, HSLC Atrium

## Agenda

### 11:30a – 12:00p Registration/Networking

Registration table and networking at Booths open at 11:30am. Lunch buffet also starts at 11:30!

### 12:00 – 1:45pm Invited Research Talk + Panel Discussion in Room 1335 with Lunch (GF and VEG options)

**12:00 - 12:05pm Welcome** – Charles (Chuck) Konsitzke, UW Biotech Center Administrative Director



**12:05 – 12:45pm Invited Research Talk** - Dr. Colin Dewey presents "Automating Cell Type Classification by Leveraging Transcriptomic Big Data"

*10 Minute Break*

**12:55 – 1:45pm Panel Discussion** – Join a panel of six research services to discuss "Managing and Supporting Big Data and Data Pipelines"


*15 Minute Break and Networking*

### 2:00 – 2:30pm Workshop Session I

Topic	UW Research Service & Industry Partner	Room #
Intro to the BioBank	BioBank	1222
Sorting Made Easy: Using the Sony MA900 to sort your own samples on your schedule	Flow Cytometry Laboratory & 	1229
Exploring Key Applications of Highly Accurate Long Read Sequencing	DNA Sequencing Core & 	1244

*15 Minute Break and Networking*

### 2:45 – 3:15pm Workshop Session II

Topic	UW Research Service & Industry Partner	Room #
Intro to High Throughput Screening (HTS)	Small Molecule Screening Facility & 	1222
Flow Cytometry Data Analysis Workflow Using FCS Express	Flow Cytometry Laboratory	1229
Curing Genome Writer's Block: overview of genetic tools to advance your research	Advanced Genome Editing Laboratory	1244

### 3:15 – 4:30pm Networking Reception

Networking at Booths in the Atrium, includes light appetizers (GF and VEG options) with soda/beer/wine

Visit our [BadgerConnect webpage](#) to view pre-recorded Core Flashtalk videos and Tutorial videos!



THANK YOU TO OUR INDUSTRY PARTNER SPONSORS



## Presentation and Workshop Descriptions

### **AUTOMATING CELL TYPE CLASSIFICATION BY LEVERAGING TRANSCRIPTOMIC BIG DATA**

*Presented by Dr. Colin Dewey*

Classifying cells by cell type is a central task in the analysis of single cell RNA-seq data. We have recently developed CellO, a software tool that automates this task with machine learning classifiers trained on thousands of public RNA-seq samples in the Sequence Read Archive.

**PANEL DISCUSSION – "Managing and Supporting Big Data and Data Pipelines"** Data generated by researchers using cores is increasing in complexity and size exponentially. *Representatives of 6 cores on campus* will discuss the benefit of these types of data and some of the challenges, including analysis of these rich data sets, access, storage and transfer, and supporting researchers data analysis needs through education and/or providing analysis services. Time will be provided for Q&A from the audience, so please feel free to pose your questions and challenges to the panel.

### **INTRO TO THE BIOBANK**

*Presented by BioBank*

This workshop will introduce you to the what, how and why of using the services of the BioBank.

### **SORTING MADE EASY: USING THE SONY MA900 TO SORT YOUR OWN SAMPLES ON YOUR SCHEDULE**

*Presented by Flow Cytometry Laboratory with Industry Partner Sony Biotechnology*

Join us for an overview of how the highly automated Sony MA900 cell sorter is uniquely designed for end-user independent operation allowing for flexibility for sorting samples on your timeline.

### **EXPLORING KEY APPLICATIONS OF HIGHLY ACCURATE LONG READ SEQUENCING**

*Presented by DNA Sequencing Core with Industry Partner Pacific Biosciences*

Next Generation Sequencing (NGS) has long been an extremely powerful tool for research and held extensive promise for clinical applications. That said, there are inherent limitations to technologies that produce short and/or low quality NGS reads. We'll touch on technologies used to produce high quality, multi-kilo base sequences then discuss some key and emerging applications for NGS that are uniquely enabled through analysis thereof.

### **INTRO TO HIGH THROUGHPUT SCREENING (HTS)**

*Presented by Small Molecule Screening Facility with Industry Partner MedChemExpress*

Preparing for screening a library of FDA-approved compounds to start an academic drug development research project.

### **FLOW CYTOMETRY DATA ANALYSIS WORKFLOW USING FCS EXPRESS**

*Presented by Flow Cytometry Laboratory*

A brief overview of FCS Express flow cytometry data analysis software and its capabilities. FCS Express is uniquely designed to provide workflows in one platform from data analysis to table, figure, and, report generation for simple to complex cytometry data sets.

### **CURING GENOME WRITER'S BLOCK**

*Presented by Advanced Genome Editing Laboratory*

Join us for an overview of genetic tools to advance your research.

Participating UW-Madison Research Services	Pre-recorded Core Flashtalk	Networking Reception	Panel Discussion
Advanced Genome Editing Laboratory <a href="https://genomeediting.biotech.wisc.edu/service/">https://genomeediting.biotech.wisc.edu/service/</a>	✓	✓	
Analytical Instrumentation Center-MS Core <a href="https://aic.sop.pharmacy.wisc.edu/mass-spectrometry-facility/">https://aic.sop.pharmacy.wisc.edu/mass-spectrometry-facility/</a>	✓	✓	
Animals Model Core <a href="https://animalmodels.biotech.wisc.edu/">https://animalmodels.biotech.wisc.edu/</a>		✓	
BioBank <a href="https://cancer.wisc.edu/research/resources/tsb/biobank/">https://cancer.wisc.edu/research/resources/tsb/biobank/</a>		✓	✓
Bioinformatics Resource Center <a href="https://bioinformatics.biotech.wisc.edu/">https://bioinformatics.biotech.wisc.edu/</a>	✓	✓	✓
Cancer Informatics Shared Resource * <a href="https://cancer.wisc.edu/research/resources/cisr/">https://cancer.wisc.edu/research/resources/cisr/</a>			✓
Cancer Metabolomics and Proteomics <a href="https://cancer.wisc.edu/research/resources/camp/">https://cancer.wisc.edu/research/resources/camp/</a>		✓	
Cancer Pharmacology Lab <a href="https://cancer.wisc.edu/research/resources/ddc/cancer-pharmacology/">https://cancer.wisc.edu/research/resources/ddc/cancer-pharmacology/</a>	✓	✓	
Circulating Biomarker Core <a href="https://cancer.wisc.edu/research/resources/cbc/">https://cancer.wisc.edu/research/resources/cbc/</a>		✓	✓
Clinical Research Imaging Core <a href="https://cancer.wisc.edu/research/resources/imaging/">https://cancer.wisc.edu/research/resources/imaging/</a>		✓	
Data Science Hub <a href="http://datascience.wisc.edu/hub">http://datascience.wisc.edu/hub</a>	✓	✓	
DNA Sequencing Core <a href="http://dnaseq.biotech.wisc.edu/">http://dnaseq.biotech.wisc.edu/</a>	✓	✓	
DoS Histology Core <a href="https://uwmadison.ilabsolutions.com/service_center/show_external/449">https://uwmadison.ilabsolutions.com/service_center/show_external/449</a>		✓	
Experimental Animal Pathology Laboratory <a href="https://cancer.wisc.edu/research/resources/tsb/epl/">https://cancer.wisc.edu/research/resources/tsb/epl/</a>	✓	✓	
Flow Cytometry Laboratory <a href="https://cancer.wisc.edu/research/resources/flow/">https://cancer.wisc.edu/research/resources/flow/</a>		✓	✓
Gene Expression Center <a href="https://gec.biotech.wisc.edu/">https://gec.biotech.wisc.edu/</a>	✓	✓	
Mass Spectrometry Facility <a href="https://massspec.biotech.wisc.edu/">https://massspec.biotech.wisc.edu/</a>	✓	✓	
Medicinal Chemistry Center <a href="https://pharmacy.wisc.edu/centers/medicinal-chemistry-center/">https://pharmacy.wisc.edu/centers/medicinal-chemistry-center/</a>		✓	
National Magnetic Resonance Facility at Madison <a href="https://nmrfam.wisc.edu/">https://nmrfam.wisc.edu/</a>	✓	✓	
Research Data Services ^ <a href="https://researchdata.wisc.edu/">https://researchdata.wisc.edu/</a>	✓		
Small Animal Imaging and Radiotherapy Facility <a href="http://cancer.wisc.edu/sairf">http://cancer.wisc.edu/sairf</a>	✓	✓	
Small Molecule Screening Facility <a href="https://cancer.wisc.edu/research/resources/ddc/smsf/">https://cancer.wisc.edu/research/resources/ddc/smsf/</a>	✓	✓	
Survey of the Health of Wisconsin <a href="https://show.wisc.edu/">https://show.wisc.edu/</a>	✓	✓	✓
Translational Research Initiatives in Pathology <a href="https://research.pathology.wisc.edu/trip-home/">https://research.pathology.wisc.edu/trip-home/</a>	✓	✓	
Vision Research Core <a href="https://core.opth.wisc.edu/">https://core.opth.wisc.edu/</a>	✓	✓	

\* Participating in Panel Discussion only

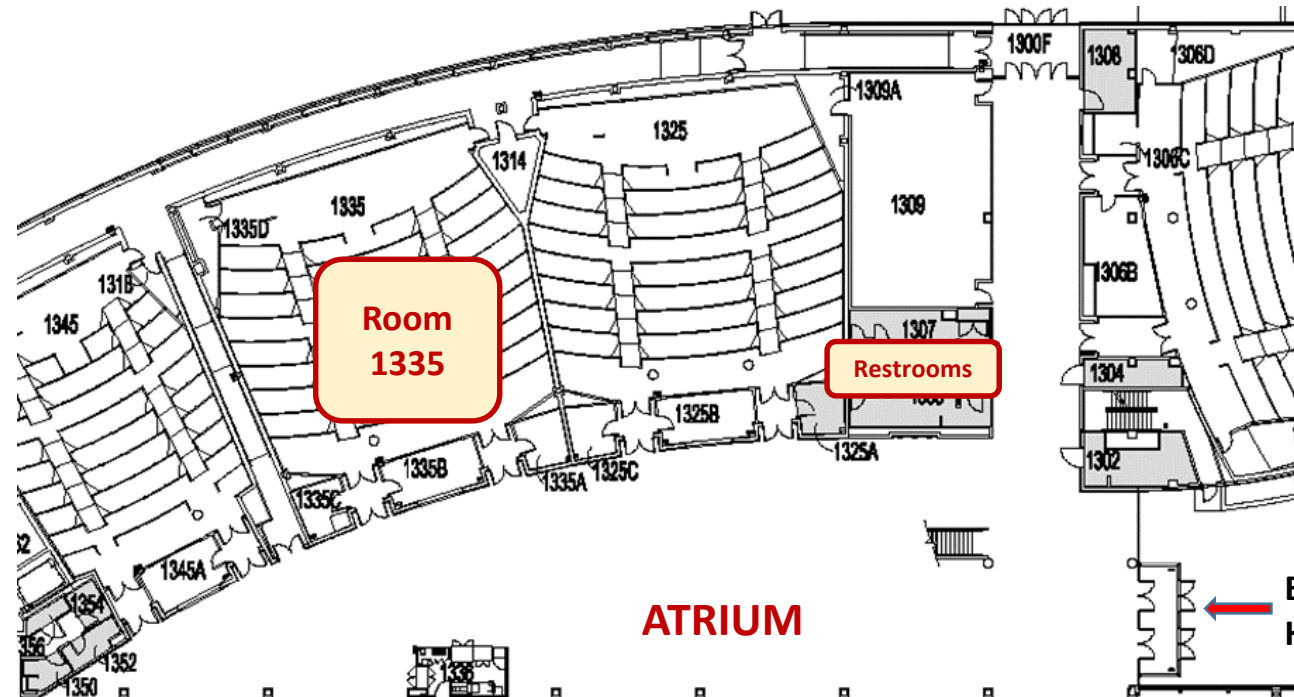
^ Participating with a pre-recorded Core Flashtalk only

## BadgerConnect 2022 Research Services Fair Booths

Booth #	Participating Research Service or Industry Partner
1	Bioinformatics Resource Center
2	Data Science Hub
3	Survey of the Health of Wisconsin
4	Gentueri Inc.
5	BioBank
6	Translational Research Initiatives in Pathology
7	Vision Research Core
8	Small Animal Imaging & Radiotherapy Facility
9	Clinical Research Imaging Core
10	Experimental Animal Pathology Laboratory
11	Newcomer Supply
12	Flow Cytometry Laboratory
13	Sony Biotechnology
14	Mass Spectrometry Core Facility
15	National Magnetic Resonance Facility at Madison
16	Cancer Metabolomics and Proteomics
17	DoS Histology Core
18	Circulating Biomarker Core
19	Cancer Pharmacology Lab
20	Small Molecule Screening Facility
21	MedChemExpress LLC
22	Medicinal Chemistry Center
23	Analytical Instrumentation Center-Mass Spec Core
24	Animal Models Core
25	Advanced Genome Editing Laboratory
26	Integrated DNA Technologies, Inc.
27	Gene Expression Center
28	10X Genomics
29	DNA Sequencing Core
30	PacBio
31	ZEISS Research Microscopy Solutions

**2022 BadgerConnect Venue**  
**UW-Madison**  
**Health Sciences Learning Center**  
**750 Highland Avenue**

Research Talk/Panel/Lunch – Rm 1335  
Workshops – Rms 1222, 1229, 1244  
Registration, Booths & Reception – Atrium



Entrance from connected  
UW Hospital & Clinics

