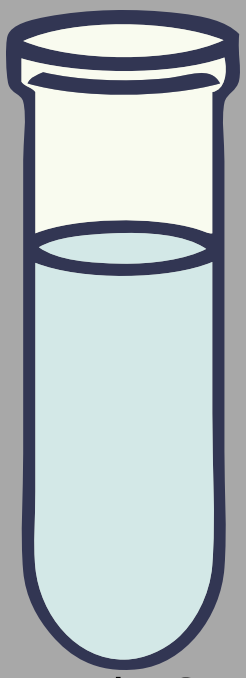
Workshops

Badger Connect

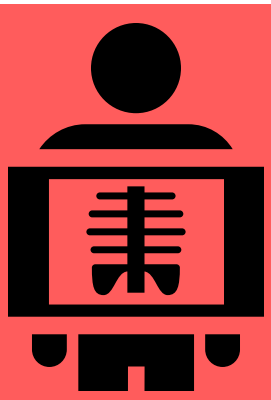
UW RESEARCH SERVICES FAIR

Welcome to researchers, post-docs, students, and staff



UW Lab Cores & Vendors

FOOD



Poster Session

Hosted by UW Carbone Cancer Center and School of Medicine and Public Health

HEALTH SCIENCES LEARNING CENTER

750 Highland Ave., Main Atrium

cancer.wisc.edu/research/BadgerConnect

MAY 3RD 3 - 7 PM

Inaugural BadgerConnect
Research Services Fair

May 3rd, 2018
3:00 – 7:00 PM, HSLC Atrium

AGENDA

Hub table and refreshments throughout

3:00 – 3:30pm **Posters (UW research services and vendor partners)**

Registration/Hub table and networking at UW research services and vendor partners displays open at 3 pm

3:30 – 3:50pm **Welcome and Introductory Remarks (Rm 1335 HSLC)**

Welcome – Peter Connor, MS, UWCCC Associate Director of Administration

Opening Remarks – Isabelle Girard, PhD, Director of UW Office of Campus Research Cores

3:50 – 4:00pm **Coffee Break**

4:00 – 4:30pm **Workshop Session I**

	Rm 1229 HSLC	Rm 1248 HSLC	Rm 1309 HSLC
Topic	Human Cell Line Authentication	Efficient CRISPR Model Generation at UW	Intro to Micro-Scale Devices for Biomedical Research
UW Service	Translational Research Initiatives in Pathology Lab	Genome Editing and Animal Models Core	MicroTechnology Core
Vendor	Promega	Lonza and Integrated DNA Technologies	–

4:30 – 5:00pm **Workshop Session II**

	Rm 1229 HSLC	Rm 1248 HSLC	Rm 1309 HSLC
Topic	Intro to Multicolor Flow Cytometry	Micro-Imaging in Research	Advancing UW Chemical Probe and Drug Development
UW Service	Flow Cytometry Laboratory	Small Animal Imaging Facility	Medicinal Chemistry Center
Vendor	Becton Dickinson	Perkin Elmer	–

5:00 – 5:30pm **Workshop Session III**

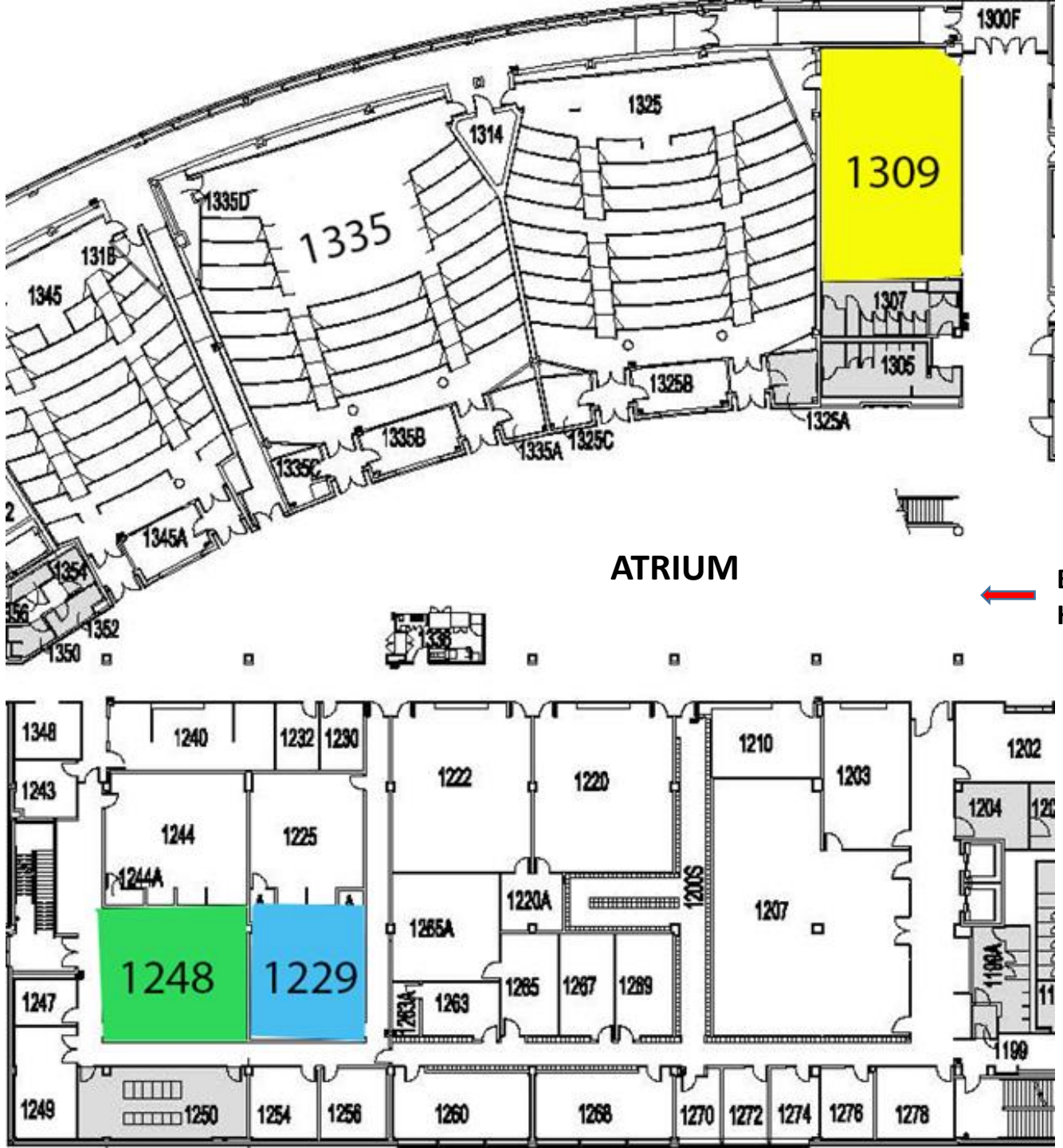
	Rm 1229 HSLC	Rm 1248 HSLC	Rm 1309 HSLC
Topic	Detecting mRNA by Flow Cytometry	Intro to Population Health Data Collection and Dissemination	Overview of iLab Web-Based Tool for Core Management
UW Service	Flow Cytometry Laboratory	Cancer Prevention and Outcomes Data	–
Vendor	ThermoFisher	–	Agilent iLab

5:30 – 7:00pm **Posters (UW services, vendors, invited researchers)**

Light dinner reception (GF and VEG options)

2018 BadgerConnect Venue
UW-Madison
Health Sciences Learning Center
750 Highland Avenue

Opener Talk – Room 1335
Workshop Session I – Room 1229
Workshop Session II – Room 1248
Workshop Session III – Room 1309
Booths & Reception – Atrium



ATRIUM

Entrance from Highland Avenue

Entrance from connected UW Hospital & Clinics

2018 BadgerConnect Research Services Fair

Particpating Research Services & Vendor Partners

UW Research Service / Center Website Links	Booth Number
Analytical Instrumentation Center	23
BioBank	21 (A)
Biomedical Research Model Services	22
Biotechnology Center	11
Cancer Pharmacology Laboratory	27 (B)
Cancer Prevention and Outcomes Data Resource	15 (A)
Circulating Biomarker Core	37 (A)
Experimental Pathology Laboratory	21 (B)
Flow Cytometry Laboratory	42
Genome Editing and Animal Models Core	12
Human Proteomics Program	45
Institute for Clinical and Translational Research	1
Medicinal Chemistry Center	27 (A)
Microtechnology Core	37 (B)
Optical Imaging Core	32
Small Animal Imaging Facility	5 (B)
Small Molecule Screening Facility	28
Translational Research Initiatives in Pathology Laboratory	19 (B)
Vision Research Core	31
Waisman Center	46
WIMR Imaging Services	7 (A)
Wisconsin Alzheimer's Disease Research Center	2
Wisconsin State Laboratory of Hygiene	35 (A)
Zeeh Pharmaceutical Experiment Station	24

Vendor Partners	Booth Number
Agilent Technologies	30
BD Biosciences	40
BioLegend	39
Fisher Scientific	44
Gilson	36
Gold Biotechnology	3
Integrated DNA Technologies	14
Labcyte	29
Lonza	13
MilliporeSigma	38
Pacific Biosciences	10
Perkin Elmer	6
Promega	20
Teledyne ISCO	25
The Jackson Laboratory	8
ThermoFisherScientific	43
Third Wave Analytics	9
W. Nuhsbaum	33

Research Posters

Booth Number	Presenter		Title	Authors	Research Service / Center Invited By	Abstract
34	Antkiewicz	Dagmara	The Oxidative and Inflammatory Potential Associated with Particulate Matter Exposures in Tibetan Plateau Households Using Traditional and Semi-Gasifier Stoves	Dagmara S. Antkiewicz, Jocelyn D. Hemming, Ellison M. Carter, Sierra Clark, Alexandra M. Lai, Xudong Yang, Martin M. Shafer, James J. Schauer, Jill Baumgartner	WI State Lab of Hygiene	Samples of indoor air and cooks' personal exposure were collected from 50 households both before and after the introduction of the semi-gasifier cookstoves. Sample composites were characterized for oxidative potential and inflammatory marker expression (research services provided by Env. Toxicology at the EHD) in-vitro, in addition to the chemical characterization including 50+ elements quantified by SF-ICPMS (service provided by Trace Elements Clean Lab, WSLH).
41 (B)	Bhattacharya	Saswati	Co-Localization of Androgen receptor in Triple Negative Breast Cancer	Saswati Bhattacharya, Pam Westmark, Ruth O'Regan	Flow Cytometry Lab	We show here the differential expression of Androgen receptor in Triple Negative Breast cancer cells, via Image Flow with the help of Lauren Nettenstrom
1 (A)	Bishop-Fitzpatrick	Lauren	Using Machine Learning to Identify Patterns of Lifetime Health Problems in Decedents with Autism Spectrum Disorder	Lauren Bishop-Fitzpatrick, Arezoo Movaghar, Jan S. Greenberg, David Page, Leann S. DaWalt, Murray H. Brilliant, & Marsha R. Mailick	Institute for Clinical and Translational Research	In partnership with the Marshfield Clinic, we used random forest to distinguish 91 middle aged and older decedents with autism spectrum disorder from a matched sample of 6,186 decedent community controls with 75% sensitivity, 94% specificity, and 93% accuracy (AUC = 0.88) based solely on their lifetime diagnoses recorded in their electronic health record. We found higher rates of most health problems in decedents with autism spectrum disorder, including cardiovascular disease, neurological disorders, and choking and swallowing problems. This research was supported with resources from ICTR and the ICTR KL2 Scholars Program.
18	Chu	Ying-Hsia	Expression of Long Non-coding RNAs MALAT1 and HOTAIR in Gastroenteropancreatic Neuroendocrine Neoplasms	Ying-Hsia Chu, Heather Hardin, Samantha Robertson, Ricardo Lloyd	TRIP Lab	Expression of Long Non-coding RNAs MALAT1 and HOTAIR in Gastroenteropancreatic Neuroendocrine Neoplasms by tissue microarray analysis and DNA extraction followed by qRT-PCR
2 (B)	Derynda	Brittany	Obstructive sleep apnea is associated with lower memory function in middle-aged adults	Brittany R Derynda, Heather Shouel, Kate Sprecher, Chase Taylor, Nancy J Davenport, Cynthia Carlsson, Mihaela Bazalakova, Sanjay Asthana, Sterling Johnson, Henrik Zetterberg, Kai Blennow, Brady Riedner, Ruth Benca , Barbara B Bendlin	WI Alzheimer's Disease Research Center	The purpose of this study was to assess the effect of OSA on memory, and test whether axonal degeneration is a mechanism for cognitive dysfunction. Apnea hypopnea index (AHI) was determined using polysomnography among 73 cognitively healthy middle-aged adults (mean age= 60.6 years) recruited from the Wisconsin Alzheimer's Disease Research Center. Neuropsychological testing was completed along with a lumbar puncture to determine CSF concentrations of neurofilament light chain protein (NFL). OSA was associated with lower memory performance in middle-aged adults. However, this effect was not mediated by NFL.
7 (B)	Ferris	Emily	Medical Imaging Research Support-Image Analysis	Emily Ferris	WIMR Imaging	A core lab that provides image analysis services to support the use of image-based outcome assessment in research studies. The technologies and techniques employed consist of mature, well-validated image analysis methods, some of which have been developed by imaging researchers at the University of Wisconsin-Madison.
35 (B)	Gorski	Patrick	Multicollector (MC-ICPMS) Capabilities at the WSLH: Public Health Applications of Tradiional and Non-traditional Stable Isotopes	Kate Smith, Martin Shafer, Patrick Gorski	WI State Lab of Hygiene	The Trace Element Clean Lab (TECL) and the WI State Laboratory of Hygiene (WSLH) recently acquired a multi-collector inductively coupled plasma mass spectrometer (MC-ICPMS, Thermo Scientific Neptune Plus), capable of ultra-high precision isotope ratio measurements. Applications for measuring high-precision stable isotope ratios have been traditionally reserved for geologic and environmental samples and on select isotope systems (e.g., Pb, Sr and Nd isotopes). With the interconnected nature public health issues and environmental factors, the MC-ICPMS is the precise tool to probe and untangle environmental and clinical cycling/processing of chemical elements by applying our knowledge of traditional isotopes systems (e.g., Pb) with new methods for assessing non-traditional isotopes (e.g., Cd, Cr, Cu and Zn).
2 (A)	Lee	Beatrice	Neuropsychological Correlates of Apathy in Cognitively Healthy Middle-Aged Individuals at Risk for Alzheimer's Disease	Beatrice Lee, Emre Umucu, Laura M. Hancock, Andrea Gilmore-Bykovskyi, Derek Norton, Hanna M. Blazel, Sterling C. Johnson, Cynthia M. Carlsson, Danielle Washington, Sanjay Asthana, Carey E. Gleason	WI Alzheimer's Disease Research Center	The sample of our study consisted of cognitively healthy individuals who have first degree relatives with AD from the Wisconsin Alzheimer's Disease Research Center's (ADRC) Clinical Core, the Investigating Memory in People At Risk, Causes and Treatments (IMPACT) cohort. We used several neuropsychological assessments to see how they predict apathy scores. Our results showed that those neuropsychological assessments can explain some of the variance in apathy scores.
5 (A)	Leiferman	Ellen	Faxitron® Ultrafocus DXA	Dept of Orthopedics (Ellen Leiferman and Matthew Halanski)	Small Animal Imaging Facility	Promotional Poster for new piece of equipment located in the SAIF, the "Faxitron". It is an enclosed cabinet style Ultra-High Resolution X-ray unit capable of Dual Energy X-ray Absortiometry in vivo. This unit has been used in bone healing/regeneration projects, phenotyping of mice, plant and seed analysis, Non-Destructive Testing of electronics, and imaging of bugs!
41 (A)	Li	Yan	Unbiased High-Dimensional Identification of Lymphocytes in Mouse Uterine	Yan Li, Jessica Vazquez, AleksandarK. Stanic	Flow Cytometry Lab	The study present comprehensive analysis of major uterine immune cell populations in mice using highly-polychromatic flow cytometry method and dimensionality reduction by Barnes-Hut modification of t-distributed Stochastic Neighbor Embedding (t-SNE) and density-based k-means clusting methods.
4 (B)	Li	Chunrong	Therapeutic combination of radiolabeled CLR1404 with external beam radiation in head and neck cancer murine xenograft models	Chunrong Li, Jenna M Mylin, Jamey P Weichert, Justin J Jeffery, Ashley M Weichmann, Kwang P Nickel, Lindsey J Abel, Reinier Hernandez, Joseph J Grudzinski, Ian R Marsh, Bryan P Bednarz, Shari M Piaskowski, Paul M Harari	Small Animal Imaging Facility	We used PET/CT imaging to determine CLR1404 uptake in xenograft mouse models.
4 (A)	Marsh	Ian	Monte Carlo Based Internal Dosimetry for Targeted Radionuclide Therapy in Preclinical Head and Neck Cancer Murine Xenograft Models	Ian R Marsh, Joe J Grudzinski, Chunrong Li, Reinier Hernandez, Justin J Jeffery, Jamey P Weichert, Paul M Harari, Bryan Bednarz	Small Animal Imaging Facility	Although significant advances have been made in the delivery and shaping of radiation, normal tissue toxicity remains dose limiting for head and neck cancer (HNC). CLR1404 exhibits potent uptake in human cancers and can provide tumor-selective PET imaging (CLR 124 with I-124) or therapeutically complement external beam radiation (CLR 131 with I-131). In this study, we measured the biodistribution and pharmacokinetics of CLR 124 in HNC models and estimated the CLR 131 radiation dosimetry.
17	Matson	Daniel	Phospho-Akt (p-Akt) Expression in Thyroid Neoplasms Including the Non-Invasive Follicular Neoplasm with Papillary-Like Nuclear Features (NIFTP)	Daniel R. Matson, Heather Hardin, Sally A. Drew, & Ricardo V. Lloyd	TRIP Lab	The PI3K/Akt/mTOR pathway has been linked to thyroid cancer pathogenesis. We worked with the Translational Research Initiatives in Pathology (TRIP) lab to validate a p-AKT antibody for IHC on patient thyroid tumors. TRIP then assisted us in staining and imaging 176 thyroid tissues and helped us examine the intracellular distribution of p-AKT using Vectra imaging technology in order to elucidate the distribution and compartmentalization of p-AKT in benign and malignant thyroid tissues.

15 (B)	Mroz	Sarah	Wisconsin HPV Environmental Scan	Sarah Mroz, MPH, Xiao Zhang, PhD, Mercedes Williams, BS, Amy Conlon, MPH, Noelle LoConte, MD	Cancer Prevention and Outcomes Data Resource	The Wisconsin Comprehensive Cancer Control (WI CCC Program) Program conducted an environmental scan of HPV vaccine-related activities between October 2014 and September 2015. We collaborated with the Cancer Prevention and Outcomes Data (C-POD) group to gather and analyze various data for the four components of the environmental scan.
16	Roy	Madhuchhanda	Differential Expression of Nicotinamide N-Methyltransferase (NNMT) in Stroma of Invasive Breast Cancer	Madhuchhanda Roy, Karla Esbona, Ernst Lengyel, Mark Eckert, and Stephanie M. McGregor	TRIP Lab	Nicotinamide N-methyltransferase (NNMT) is expressed in multiple cancers and in some cases is associated with a poor prognosis in comparison to cases with lower expression. The goal of this study was to characterize the expression of NNMT in breast carcinoma and to determine if it holds prognostic implications in this setting. Three hundred seventy two cases of FFPE breast cancer tissues were used to construct a tissue microarray and subjected to IHC for NNMT (Santa Cruz G-4) performed by the TRIPLab.
19 (A)	Zhang	Ranran	Long Non-Coding RNA MALAT1 Expression in Thyroid Tissues and Tumors; Actionable Genetic Mutations Are Rare in Pituitary Carcinomas and Atypical Pituitary Adenomas; Oncogenic Roles of Multiple Long Non-coding RNAs (lncRNAs) in Papillary Thyroid Carcinoma	Ranran Zhang, Heather Hardin, Wei Huang, Darya Buehler, Sofia Asioli, Alberto Righi, Francesca Maletta, Anna Sapino, and Ricardo V. Lloyd, Jason N Rosenbaum, M Shahriar Salamat, Molly Accola, William Rehrauer	TRIP Lab	Study of the lncRNA MALAT1, ROR, PVT1 and HOTAIR in thyroid cancer; study of the mutations in pituitary carcinoma
26	Zhou	Ting	Discovery of a new class of RIP1/RIP3 dual inhibitors with anti-cell death and anti-inflammatory properties	Ting Zhou, Qiwei Wang, Noel Phan, Jun Ren, Huan Yang, John B. Feltenberger, Zhengqing Ye, Weiping Tang, and Bo Liu	Medicinal Chemistry Center	Receptor interacting protein kinase-1 and -3 (RIP1 and RIP3) are essential mediators of cell death processes and participate in inflammatory responses. Our group recently demonstrated that gene deletion of Rip3 or pharmacological inhibition of RIP1 attenuate the pathogenesis of abdominal aortic aneurysm. In this study, we screened 1,141 kinase inhibitors available in the Small Molecule Screening Facility and found a new type of RIP1/RIP3 inhibitor which inhibited necroptosis signaling and blocked aneurysm progression in animal aneurysm models.
1 (B)	Zhu	Fen	PRMT5 is upregulated by BCR signaling and promotes the survival of DLBCL cells	Fen Zhu	Institute for Clinical and Translational Research	We show that DLBCL cells have increased expression of PRMT5 comparing to naive B cells due to the oncogenic B cell receptor (BCR) signaling, and inhibition of PRMT5 is selectively toxic to DLBCL cells. Thus, our study provides the rationale for targeting PRMT5 as a therapeutic strategy for DLBCL.

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