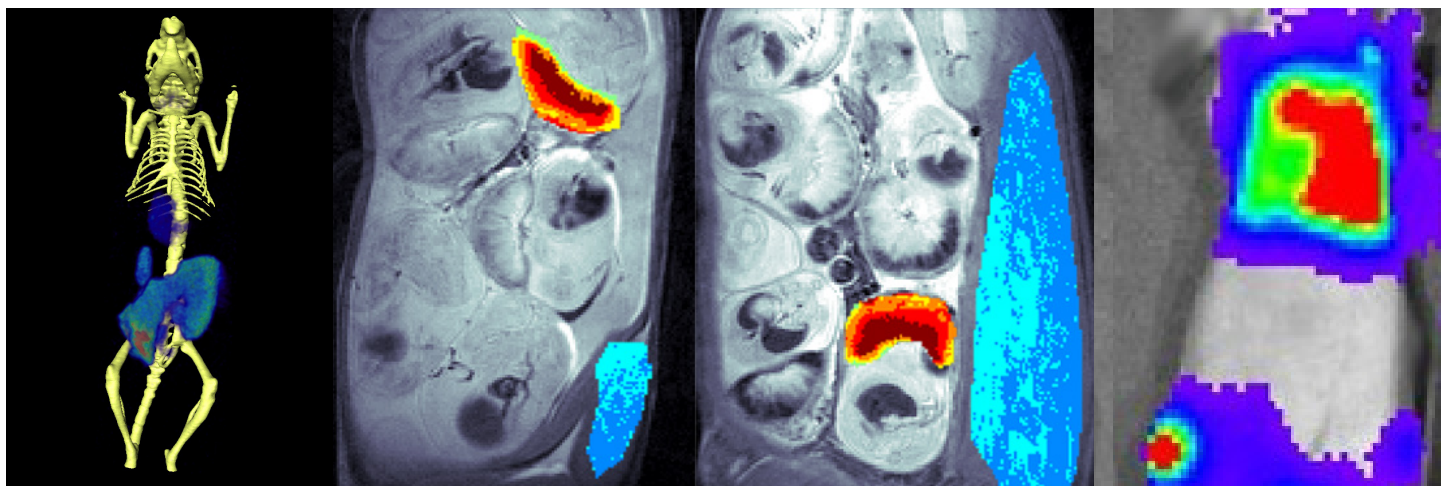




presents

Preclinical Imaging Consortium 2019



**5th Annual Meeting
April 28-30, 2019**

**Northwestern University
Evanston, IL**

Northwestern |  Chemistry of Life
Processes Institute
Transforming Science. Transforming Life.

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5th Annual Preclinical Imaging Consortium (PIC) Meeting

The 5th annual Preclinical Imaging Consortium (PIC) meeting is hosted by the Center for Advanced Molecular Imaging (CAMI) at Northwestern University, Evanston, IL.

The mission of PIC is to create a meeting place where knowledge of operating preclinical imaging facilities is shared openly.

PIC began five years ago as a small gathering of Midwestern preclinical imaging center directors. It has grown rapidly over the past five years, and expanded its scope well beyond the Midwest (hence the name change). PIC brings together experts in preclinical imaging from both academia and industry, with this year's focus on research rigor and best practices. While other meetings focus on disease models or technical aspects of imaging modalities, one goal of this meeting is to educate imaging scientists about techniques they may be less familiar with. The casual setting of an intentionally small attendance facilitates candid dialog among imaging centers and industry representatives.

In addition to the Program Committee, there are numerous individuals who assisted in planning the meeting. In particular, many thanks to Penelope Johnson for her assistance in coordinating and organizing the meeting, Alex Waters for program planning, as well as Sara Mayol and Anlil Brikha for their assistance.

Importantly, the meeting would not have taken place without the generous support of our numerous sponsors, including host sponsors. On behalf of PIC Program Committee and the attendees, thank you for your continued support.

The 6th annual PIC meeting will be hosted by Michigan State University. We hope you find this year's PIC engaging and valuable. We look forward to continuing the conversation at Michigan State.

Sincerely,

Chad Haney, PhD and Thomas Meade, PhD

On behalf of the PIC Program Committee

Program Committee

Alex Waters, PhD

Chad Haney, PhD

Charles Manning, PhD

Chin Ng, PhD

Erik Shapiro, PhD

Jenny Yang, PhD

Justin Jeffrey, MS

Kah Whye Peng, PhD

Kooresh Shoghi, PhD

Lara Leoni, PhD

Marty Pagel, PhD

Michael Nichols, PhD

Mohammed Farhoud, MS

Paul Territo, PhD

Host Sponsors

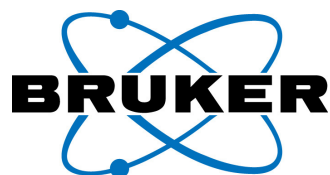
Robert H. Lurie Comprehensive
Cancer Center

In Partnership With



PIC Thanks Our Generous Sponsors

Gala Dinner



Platinum Level



Gold Level



Silver Level



Bronze Level

Logistics & Locations at PIC

Registration – Norris University Center, 2nd Floor Lobby

Breakfast and Refreshments – Norris University Center, 2nd Floor Lobby

Presentations (Sunday, Monday, Tuesday) – Louis Room, Norris Center, 2nd Floor

Vendor posters (Sunday, Monday, Tuesday) – Louis, Lake, and Northwestern Rooms, Norris Center, 2nd Floor

Gala Dinner at Smylie Brothers Brewing Co (Sunday at 7:30 PM) - 1615 Oak Ave, Evanston, IL. Buses will depart from Norris Center front entrance at 7:15 PM.

Science & Industry Poster Session (Monday) – Northwestern Room, Norris Center, 2nd Floor

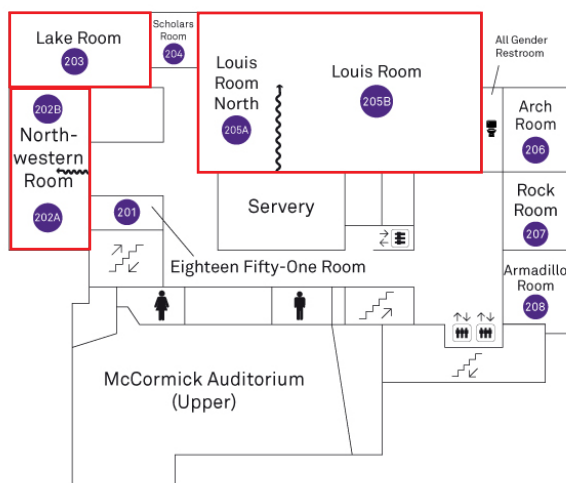
Facility Poster Session & Reception (Monday) – Silverman Hall East Tower, 1st Floor lobby. Facility posters will be on display from Sunday to Monday afternoon in the Lake Room, Norris Center, 2nd Floor.

Lunch (Monday, Tuesday) – Norris Center, 2nd Floor Lobby

Program Committee Exit Meeting (Tuesday) – CAMI conference room, Silverman Hall East, Suite 1529

Facility Tours (Monday) – CAMI tours will be available during the Facility Poster Session on Monday evening. Please sign up for a slot at the registration table. Signups will occur on a first-come first-serve basis until space is filled. Please meet in the CAMI lobby (Silverman 1529) at your scheduled tour time.

Map of Norris Center 2nd floor



5th Annual PIC Meeting Agenda

Sunday, April 28

16:00 – 16:45	Imaging Facility Managers Roundtable (invitation only)
17:00 – 17:20	Welcome, opening remarks Chad Haney , Northwestern University
17:20 – 17:45	MRI reporter gene Heather Gray-Edwards , University of Massachusetts
17:50 – 19:00	Spotlight: Veterinary Best Practices Moderator: Nicolette Zielinzki Mozny
17:50 – 18:15	Functional imaging of the host-microbe interaction Emma Liechty , Northwestern University
18:15 – 18:40	Companion animal cancer models used to validate optical imaging agents for cancer detection Maria Cekanova , UT Knoxville
18:40 – 19:00	Discussion
19:15	Buses depart for gala dinner
19:30 – 22:00	Gala dinner at Smylie Brothers Sponsored by Bruker and LCC

Monday, April 29

8:00 – 9:20	Power Pitch (Vendors) Moderator: TBD
9:20 – 10:15	Spotlight: MRI techniques Moderator: Jim Quirk
9:20 – 9:45	MRI in preclinical brain and spinal cord trauma: Pulse sequence developments and collaboration initiatives. Matt Budde , Medical College of Wisconsin
9:50 – 10:15	Using the water proton resonance to probe the tissue microstructure of postmortem brain tissue. Sean Foxley , University of Chicago
10:20 – 10:40	Break

10:40 – 11:35	Spotlight: Specific Modalities Moderator: Brian Roman
10:40 – 11:05	Tracking theranostic nanoparticles using optoacoustic imaging Lacey McNally , Wake Forest
11:10 – 11:35	Electron Paramagnetic Resonance (EPR)molecular oxygen images: why should we be interested? Howard Halpern , University of Chicago
11:40 – 12:35	Spotlight: PET Imaging Moderator: Mike Nichols
11:40 – 12:05	F-18 Tetrafluoroborate as NIS probe Tim DeGrado , Mayo Clinic
12:10 – 12:35	Attenuation correction for PET/MR Richard LaForest , Washington University
12:40 – 14:05	Lunch (included) Science & Industry poster session
14:05 – 15:00	Spotlight: Machine Learning & Reconstruction Moderator: Chris Flask
14:05 – 14:30	AI in medical imaging Maryellen Giger , University of Chicago
14:35 – 15:00	Model-observer-based image quality metrics for tomographic medical imaging systems development Xiaochuan Pan , University of Chicago
15:05 – 15:25	Break
15:25 – 16:40	Breakout sessions
16:40 – 17:40	New Facility Talks
17:55 – 19:55	Reception & Facility posters (Silverman Hall) CAMI tours (optional)

Tuesday, April 30

8:00 – 9:25	Spotlight: Imaging probes Moderator: Erik Shapiro
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8:00 – 8:25	Transition metal contrast agents Janet Morrow , University of Buffalo
8:30 – 8:55	Modality driven design of ferrite nanoparticles: How MPI Tracers deviate from MRI contrast agents Ben Fellows , UC Berkeley
9:00 – 9:25	Strategies to Improve Cancer Radioimmunotherapy Kurt Zinn , Michigan State University
9:30 – 9:50	Break
9:50 – 10:45	Spotlight: Outside the lab Moderator: Paul Territo
9:50 – 10:15	Career Opportunities for Scientists Working in Core Facilities Phil Hockberger , Northwestern University
10:20 – 10:45	Integrating Imaging Data with Multiple Readouts to Understand Mammalian Adaptation to Spaceflight Martha Hotz Vitaterna , Northwestern University
10:50 – 11:10	Break
11:10 – 12:35	Spotlight: Commercialization Moderator: Amie Phinny
11:10 – 11:35	Chicago Biomedical Consortium: Supporting Basic Biomedical and Translational Research Karen Snapp , CBC / Northwestern University
11:40 – 12:05	Molecular Imaging Start-ups: Lessons learned Jamey Weichert , University of Wisconsin, Madison
12:10 – 12:35	Biotech Start Ups: What I wish I knew before... Tom Meade , Northwestern University
12:40 – 13:00	Closing Remarks Chad Haney , Northwestern University
13:00 – 14:00	Lunch (included)
14:15 – 15:00	Exit meeting (invitation only)

Power Pitch Presentations

Monday, April 29 at 8am

Presented in (mostly) alphabetical order by company name

Company	Presenter	Title
BioInVision	Madhu Gargasha, PhD	Mission Impossible: Now You Can Accept The Challenge - The Hunt for Single Cells
Bruker	Todd Sasser, PhD	SiPM PET imaging advancements
Emit Imaging	Mat Brevard, MSc	Bridging The Gap Between In Vivo and Histopathology
Fuji-Visualsonics	Drew Heinmiller	Assessing disease with ease: Multi-modality imaging for multi-disease monitoring in vivo
inviCRO	Rhonda Silva	Invicro: Medical Imaging Informatics
Magnetic Insight	Jeff Gaudet, PhD	Directing localized Hyperthermia with Magnetic Particle Imaging: Image, Quantify, Target & Treat
MILabs	Frank Schwahn	High-Performance, Fully-Integrated PET/ SPECT/Optical/Diagnostic CT
MOLECUBES	Ewout Vansteenkiste, PhD	Accelerating Preclinical Imaging - MOLECUBES
MR Solutions	Gilberto Prudencio, BSc	Preclinical Multimodality Innovations
Sofie	Patrick Phelps	SOFIE - From Start to Clinic
SonoVol	Ryan Gessner, PhD	SonoVol's Vega Ultrasound Platform: No sonographer? No problem.
Spectral Imaging	Bo Nelson	Improved, Next Generation, Small Animal Optical Imaging Systems
ThermoFisher	Alexander S. Hall, PhD	Amira Software – The Flexible Biomedical Image Analysis Toolkit
iThera	Tullio Giannitti	Multispectral Optoacoustic Tomography aka MSOT imaging: When Exciting with Light Sounds Amazing

Facility Posters

Presented Monday, April 29 at 6pm in Silverman Hall

Posters will be on display from Sunday 5pm - Monday 5pm in Norris Lake Room

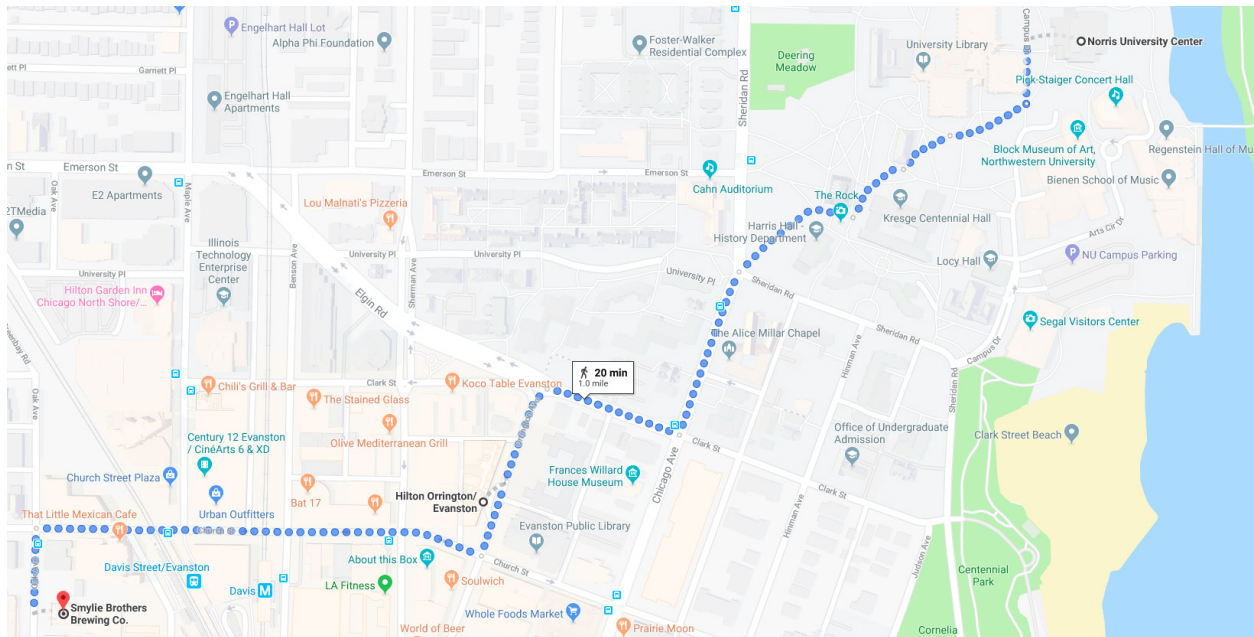
Poster #	Presenting Author	Title/Institution
F1	Alaina Marquardt, BS	Colorado-Based MAFI (Multimodal Advance Fast Imaging) in Mouse Brain Tumor Models
F2	Alex Waters, PhD	Center for Advanced Molecular Imaging at Northwestern University
F3	Ali Arbab, MD, PhD	Core Imaging Facilities for Small Animals at Augusta University
F4	Allison Cohen, PhD	Vanderbilt Center for Molecular Probes
F5	Anna Bratasz, PhD	The OSU Small Animal Imaging Core Facility
F6	Ashley Weichmann, BS	UW Small Animal Imaging and Radiotherapy Facility (SAIRF)
F7	Christiane Mallett, PhD	Michigan State University Molecular and Cellular Imaging Center
F8	James Quirk, PhD	Biomedical Magnetic Resonance Laboratory at Washington University School of Medicine
F9	Jenna Steiner, AAS, CVT	Colorado Animal Imaging Shared Resources
F10	Jenny J. Yang, PhD	Atlanta Translational Imaging Consortium
F11	Lara Leoni, PhD	The Integrated Small Animal Imaging Research Resource
F12	Lixin Ma, PhD	University of Missouri, Dept. of Radiology
F13	Nicola Bertolino, MS	Center for Translational Imaging at Northwestern University
F14	Paul Keselman, PhD	Animal Imaging Core at University of Kansas Medical Center
F15	Susan Walsh, MA	Small Animal Imaging Core at University of Iowa
F16	Walter Akers, DVM, PhD	Center for In Vivo Imaging and Therapeutics at St. Jude Children's Research Hospital
F17	Weiguo Li, PhD	Precinical Imaging Core at University of Illinois at Chicago

Science & Industry Posters

Presented Monday, April 29 at 12:40pm in the Northwestern Room

Poster #	Presenting Author	Title
1	Aaron Safadi, BS	Developing a Contrast Phantom for High Field Preclinical MRI
2	Amanda Bedwell, MS, RVT, LATG	Creating an Onboarding Program for New Employees
3	Ben Cox, PhD	Phantech: Innovative hardware and software for medical imaging
4	Boris Epel, PhD	Oxygen-Guided Radiation Therapy
5	Hao Li, MS	Molecularly Targeted Multimodal Fluorescence-Magnetic Resonance Imaging Agents for Early Diagnosis of Brain Tumor
6	Inna Gertsenshteyn, BA	Multimodality Imaging of Hypoxia using EPRI, MRI, and PET/CT
7	Jonathan Peters, MS	Measurement of the Effect of Acarbose on Sugar Absorption in a Mouse Model Using [14C]-Maltodextrin
8	Kah Whye Peng, PhD	Using NIS Reporter Gene Imaging for Tracking Cellular Therapies
9	Kierra Eldridge, AAS Vet. Tech.	Lead-Induced Neurotoxicity of the Brain Barrier: Implications for Alzheimer's Disease
10	Lucas Figueiredo, BS	Model-AD: Time dependent characterization of novel mice models of Alzheimer's disease.
11	Mattia Quattrocchi, PhD	Weekly low-dose glucocorticoids remodel muscle metabolism and curtail steroid side effects
12	Maxim Slesarev, BS	MicroPET: A Platform for Neuroimaging
13	Nicola Bertolino, MS	Cognitive neuroimaging of Awake Rabbits
14	Scott Persohn, BA	Utilization of the Paxinos-Franklin Mouse Brain Atlas with 64Cu-PTSM PET Tracer in APOE4, TREM2R47H and APOE44 TREM2 Mice-Correlation of PET and Autorad
15	Steven Johnson, PhD	Whole-body assessment of drug toxicity
16	Thomas Hope, PhD	Using PET/CT to study iv antibody distribution and analysis of SIV/HIV infected cells after initiation of antiretroviral treatment.

Walking Map Between Hotel Orrington, Norris, and Smylie Bros.



<https://goo.gl/maps/HZYofvAr6vH2>

The above link & QR code contain walking directions to the Sunday evening gala dinner, generously sponsored by Bruker BioSpin and the Robert H. Lurie Comprehensive Cancer Center.

Buses will be available at 7:15 PM to take you to Smylie Brothers Brewing Co. If you wish to walk, or to stop at the Hilton Orrington, the directions in the link above will get you to dinner in 20 minutes walking.

