PET-RTRC

The latest news from the PET Radiotracer Translation and Resource Center

Washington University in St. Louis
School of Medicine

Spring 2025

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Letter from the Program Director

Dear Colleagues,

Welcome to the Spring 2025 edition of the PET-RTRC newsletter. Since our last newsletter we have had an active winter/spring. Dr. Simon Cherry delivered a fantastic seminar in November on “Advances in PET Technology and Implications for Patient Care and Medical Research”. We also co-sponsored the Welch Memorial Lecture with Bernd Pichler’s talk on “Translational Tumor Imaging Program at WSIC: Tumor Stress & Immune Imaging”. In February, our hybrid-format Workshops and Scientific Session attracted more than 200 registrants. The Workshops focused on Preclinical and Clinical Imaging as well as FDA Regulatory updates. New to the Workshops this year were afternoon “hands-on” training sessions on the utilization of preclinical and clinical software for image analysis. The Scientific Session focused on Heart-Brain interactions with outsanding lectures from Drs. Frank Bengel, Hongyu An, Mandy van Leent, and Karl Friedrichsen. We also had a Rapid Fire talk session which allowed young investigtors to highlight their innovative work. Finally, our External Advisory and Tracer Review Committee meeting on February 21 provided valuable feedback to help strengthen the Center’s impact and maintain its status as a vital resource for the research community.

In this issue, the Spotlight section focuses on our excellent Project Managers, Michelle Hoelscher and Lisa Detering. They oversee all aspects of the P41 and are critical to its functioning at a high level. We would be lost without them!

We'll be at Booth #625 at SNMMI in New Orleans this June—come say hello! Additionally, we'll have a poster at iSRS in Gold Coast, Australia, in May and a booth at WMIC in Anchorage, Alaska, in September. Also, a PET-RTRC session at WMIC will showcase TR&D and Collaborative Projects from our P41, along with molecular imaging P41s at Yale and UT Southwestern.

Please visit our website to learn more about the PET-RTRC and our upcoming activities. To stay up to date with our most recent developments or to be added to our mailing list, please contact Lisa Detering at lisa.moore@wustl.edu

Best Regards,

Robert J Gropler, MD
PET-RTRC Program Director

The PET-RTRC is the U.S. innovation hub for the development of novel PET radiotracers. Leading the way for a nationwide network of collaborators, the center seeks to expand the understanding of diseases and advance the mission of precision imaging.

MIR Mallinckrodt Institute of Radiology

NIH National Institute of Biomedical Imaging and Bioengineering

The PET-RTRC is supported by the NIH NIBIB Grant # P41 EB025815

Spotlight

The NIBIB funded P41 PET-RTRC program at WUSTL and MIR aims to develop new PET radiotracers to deliver accurate diagnosis and personalized treatment of human disease. In the current funding cycle, the PET-RTRC program is centered on the development of PET radiotracers for imaging inflammation and inflammatory responses. With 16 Collaborative Projects (CPs), 18 Service Projects (SPs), three TR&Ds, and dedicated cores for informatics, training, and dissemination, the PET-RTRC is the largest grant in Radiology at Washington University.

Program Manager, Michelle Hoelscher, CNMT (right), and Program Coordinator, Lisa Detering, MS (left), serve on both the Administrative Core and the Technology Training and Dissemination Core, where they play essential roles in coordinating the Center's operations and educational efforts. The Administrative Core manages the overall operations of the PET-RTRC, overseeing infrastructure, financial support, and internal communication within WashU, as well as facilitating interactions between WashU and local, national and international CPs and SPs. Additionally, they serve as the liaison between the Center and the NIBIB, ensuring alignment with the broader research goals. The Core is also responsible for tracking the regulatory status of all ongoing projects and organizing the PET-RTRC's annual meeting, a task that requires meticulous planning and organization.

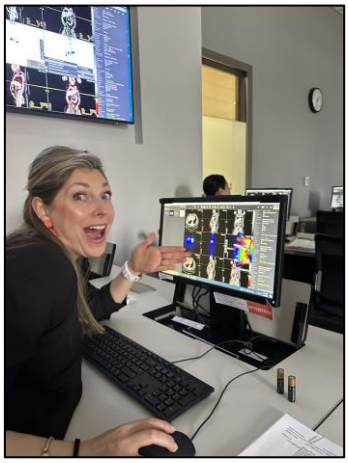

Figure 1: Michelle testing her skills in software analysis during the Workshops—proof that we truly wear many hats!

Lisa and Michelle lead the planning and execution of the PET-RTRC's three-day annual workshop and scientific session, collaborating with various WashU departments and external partners to ensure the event is smoothly coordinated and meets the expectations of attendees. They work directly with industry supporters to secure funding, ensuring the event maintains its high standard of excellence. In addition to the main event, they also organize specialized training opportunities, such as the hands-on imaging analysis software sessions offered during the 2025 Workshops (**Figure 1**).

Figure 2: Submitting the 600+ page renewal application: a true test of patience, coordination, and navigating the depths of eRA Commons. Madness, but we successfully made it through!

Figure 3: Taking the PET-RTRC international—booth duty with a view at WMIC in Prague, Czech Republic!

Beyond their work with the annual event, Lisa and Michelle actively pursue scientific outreach to increase the visibility of the Center's work. They maintain a strong presence at major global conferences, including iSRS, SNMMI, and WMIS, fostering collaboration and broadening the Center's impact on the international stage (**Figure 3**). We hope you'll stop by and say hello to us in Gold Coast, New Orleans, and Anchorage this year!

With more moving parts than a PET scanner and more opinions than a Reddit thread, keeping this grant aligned with its mission takes top-tier organization, strategic budget management, and a PhD in Chaos Coordination- because let's be honest, what's science without a little organized chaos?

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Collaborative Projects

ALABAMA
University of Alabama at Birmingham
- Cancer Inflammation

ARIZONA
BNI Phoenix
- Multiple Sclerosis

CALIFORNIA
Stanford University
- Multiple Sclerosis
- Pancreatic Cancer

CONNECTICUT
Yale University
- Abdominal Aortic Aneurysm
- Acute Respiratory Distress Syndrome

GEORGIA
Emory University
- Bacterial Infection

LOUISIANA
Louisiana State University
- Ischemic Vascular Remodeling

MISSOURI
Washington University School of Medicine
- Abdominal Aortic Aneurysm
- Cardiac Inflammation
- Neuroinflammation
- Neuroinflammation in Nigrostriatal Injury

NEW YORK
Memorial Sloan Kettering Cancer Center
- Cancer Biology

NORTH CAROLINA
University of North Carolina at Chapel Hill
- Bladder Cancer

Service Projects

CALIFORNIA
University of California San Diego
- Metastatic Cancer

University of Southern California
- Myeloma Bone Disease

CONNECTICUT
Yale University
- Mitochondrial Diseases
- Neuroinflammation

MISSOURI
Saint Louis University
- Cardiac Inflammation

Washington University School of Medicine
- Multiple Sclerosis
- Osteoarthritis
- Pulmonary Fibrosis

NEW YORK
Icahn School of Medicine at Mount Sinai
- Myocardial Infarction

PENNSYLVANIA
University of Pittsburgh Medical Center
- Atherosclerosis

TEXAS
University of Texas Southwestern
- Kidney Injury

UTAH
University of Utah
- Atherosclerosis

WASHINGTON DC
Howard University
- Traumatic Brain Injury

GERMANY
Hannover University
- Cardiac Inflammation and Fibrosis

Interested in becoming a member of the Center?

Please fill out the Collaborative Project or Service Project application and send to lisa.moore@wustl.edu

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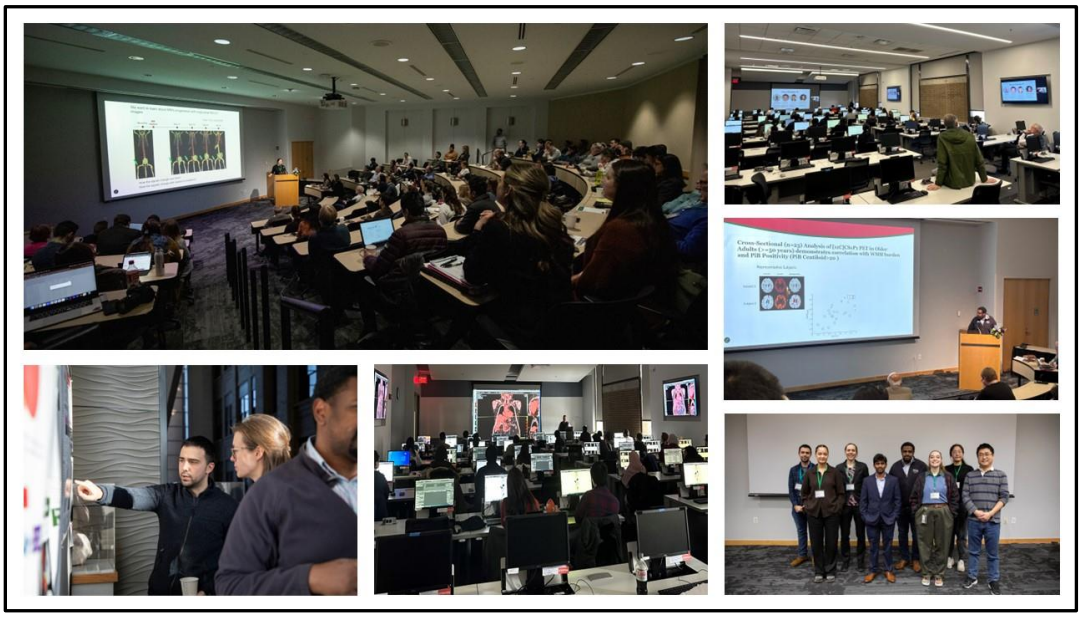
Seminar Speaker | November 19, 2024

Simon Cherry, PhD- University of California, Davis

In November, we welcomed Dr. Simon Cherry from the Yale School of Medicine to give a Seminar titled "*Advances in PET Technology and Implications for Patient Care and Medical Research*." This lecture was offered both in person and via Zoom and was attended by over 150 participants across both platforms. Watch the Seminar here!

New to the 2025 Workshops | Feb 18-20, 2025

Hands on imaging software training + Rapid Fire sessions



This year's workshops introduced two new hands-on software imaging sessions, led by representatives from MIM and Gremse IT. These experts guided participants through both foundational concepts and more advanced tools for data analysis. The sessions were enthusiastically received, and we hope to expand the number of interactive offerings in future workshops.

Additionally, we provided a platform for 10 early career investigators to present their research during the scientific session. Presenting to an audience of peers, senior investigators, and professionals from various disciplines gave them valuable exposure and constructive feedback from a broad scientific community.

The PET-RTRC is supported by the NIH NIBIB Grant # P41 EB025815

Publications

TR&D 1:

Luo Z, Han J, Liu H, Rosenberg AJ, Chen DL, Gropler RJ, Perlmutter JS, Tu Z. *Syntheses and in vitro biological evaluation of S1PR1 ligands and PET studies of four F- 18 labeled radiotracers in the brain of nonhuman primates*. Organic & biomolecular chemistry. 2018 December 5;16(47):9171-9184. PubMed PMID: 30462126

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QI2R:

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Savaikar MA, Whitehead T, Roy S, Strong L, Fettig N, Primeau T, Luo J, Li S, Wahl RL, Shoghi KI. *Preclinical PERCIST and 25% of SUV_{max} threshold: Precision imaging of response to therapy in co-clinical ^{18}F-FDG PET imaging of TNBC patient derived xenografts*. J Nucl Med. 2020 Jun;61(6):842-849. PubMed PMID: 31757841

Look for Us

PET-RTRC banner @ **iSRS May 11-15, 2025** | Gold Coast, Australia

PET-RTRC BOOTH #625 @ **SNMMI June 21-24, 2025** | New Orleans, Louisiana

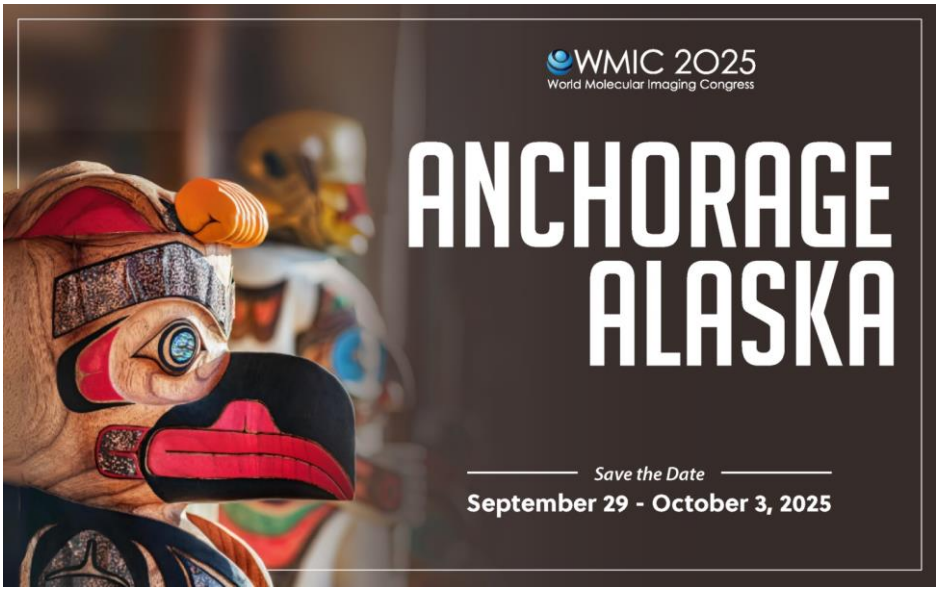
The PET-RTRC is supported by the NIH NIBIB Grant # P41 EB025815

Upcoming Events

Immuno-Cardiology Symposium **September 18-19, 2025** | Bar Harbor, Maine

The 2nd Immuno-Cardiology Symposium, hosted by the "Immuno-FIB HF" Leducq Foundation, will explore the role of the immune system in heart disease, focusing on inflammation and fibrosis in cardiac and related organ systems like the kidney, lung, and liver. The symposium will highlight new diagnostic techniques, emerging therapeutics, and imaging technologies to address dysregulated immune functions in diseases such as heart failure. Held over two days at The Jackson Laboratory and MDI Biological Laboratory in Bar Harbor, Maine, the event will feature key topics like autoimmunity, inflammation resolution, organ fibrosis, and therapeutic interventions. Early-stage researchers are invited to submit abstracts for talks or poster presentations.

PET-RTRC BOOTH #612 @ **WMIC Sept 29 - Oct 3, 2025** | Anchorage, Alaska



In addition to having a Booth presence at WMIC in Alaska, the PET-RTRC will have speakers at the session entitled "P41 Centers and the Art of Collaboration Driving Scientific Innovation." The organizational centerpiece for scientific innovations developed by a P41 Center is the "push-pull" relationship between the Technology Research & Development projects and the Collaborative Projects. In this session will be three examples of how this relationship is driving new PET related research aimed at transforming biomedical research and precision medicine.

This session is currently scheduled for Wednesday, October 1st @ 3:30pm AKDT

Leadership

Executive Committee Members

Robert Gropler, MD | Chair, Program Director, TR&D 2 Co-Leader

Will Tu, PhD | TR&D 1 Leader

Yongjian Liu, PhD | TR&D 2 Leader

Vijay Sharma, PhD | TR&D 3 Leader

Buck Rogers, PhD | Training & Dissemination Project Leader

Michael Nickels, PhD | Training & Dissemination Co-Leader-Dissemination

Richard Laforest, PhD | QI2R Leader

Andrew Gelman, PhD | TR&D 3 Co- Leader

Robyn Klein, MD, PhD | TR&D 1 Co- Leader

Michelle Hoelscher, CNMT | Program Manager

Sally Schwarz, RPh, BCNP | Training & Dissemination Co-Investigator

Farrokh Dehdashti, MD | Training & Dissemination Co-Investigator

Pamela Woodard, MD | Training & Dissemination Co-Investigator

How to find us…

mir.wustl.edu/pet-rtrc

#PETRTRC

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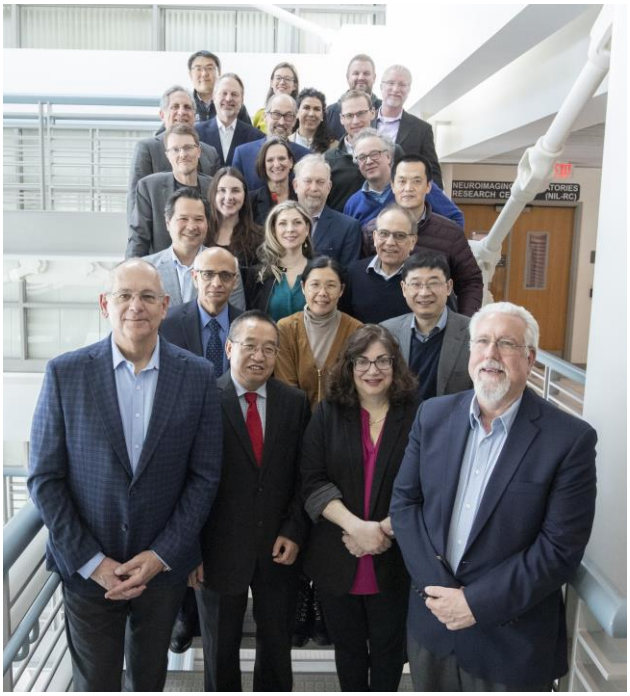

For more information about the PET-RTRC contact:

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Washington University in St. Louis
School of Medicine

MIR Mallinckrodt Institute of Radiology