6th Milwaukee Symposium: Optical Micro-spectroscopy & Molecular Imaging and RIIO Alliance 3rd General Assembly Meeting

A. Milwaukee Symposium

Day 1: Thursday, 25 August 2022

UW-Milwaukee, Kenwood IRC – 3135 North Maryland Ave., Milwaukee, WI

7:45 - 8:45	**REGISTRATION (KIRC Atrium) and BREAKFAST** Food served in KIRC 1140	
8:45 – 9:00	**Opening & Welcome** (KIRC 1150)	
	SESSION 1 (KIRC Room 1150) **Chair: Graeme Milligan** (University of Glasgow)	
9:00 – 9:30	**Keynote 1** **Catherine Royer** (Rensselaer Polytechnic Institute)	*Mechanisms controlling Start in budding yeast revealed by fluctuation microscopy*
9:30 – 9:40	Keynote 1 Q & A	
9:40 – 10:10	**Keynote 2** **Kai Zhang** (University of Illinois at Urbana-Champaign)	*Finetune receptor tyrosine kinase activity with light*
10:10 – 10:20	Keynote 2 Q & A	
10:20 – 11:20	**Coffee Break and First Poster Viewing Session**	
	SESSION 2 (KIRC Room 1150) **Chair: Ionel Popa** (University of Wisconsin – Milwaukee)	
11:20 – 11:50	**Keynote 3** **Suzanne Scarlata** (Worcester Polytechnic Institute)	*Using fluorescence imaging to uncover novel G protein / phospholipase Cβ signaling pathways*
11:50 – 12:00	Keynote 3 Q & A	
12:00 – 12:30	**Selected Poster Talks (SPTs)** **(5-minute talks & questions)** **David Frick** (UW-Milwaukee) **Tyler Camp** (UI @ Urbana-Champaign) **Monica Gonzalez-Magaldi** (UT @ Austin) **Madison Rennie** (Worcester) **Ece Ozdemir** (Johns Hopkins)	 *The SARS-CoV-2 Nsp3 Mac1 domain…* *Single-molecule orientation…* *Receptors for Insulin…* *Changes in stress granule formation…* *A quantitative microscopy method…*
12:30 – 13:30	**LUNCH** – Served in KIRC 1140 Seating in KIRC 1130 and 1160	

Milwaukee Symposium – Day 1: Thursday, 25 August 2022 (Continued)

UW-Milwaukee, Kenwood IRC – 3135 North Maryland Ave., Milwaukee, WI

	SESSION 3 (KIRC 1150) **Chair: Claudiu Gradinaru** (University of Toronto at Mississauga)	
13:30 – 14:00	**Keynote 4** **Kalina Hristova** (Johns Hopkins University)	*Quantification of ligand-induced lipid and protein microdomains with distinct signaling properties*
14:00 – 14:10	Keynote 4 Q & A	
14:10 – 14:40	**Keynote 5** **Ionel Popa** (University of Wisconsin-Milwaukee)	*A live-image processing algorithm to measure fluctuations of single molecules and maintain sample focus with nanometer resolution over hour-long recordings*
14:40 – 14:50	Keynote 5 Q & A	
14:50 – 15:40	**General Discussion** Instigated by: Kalina Hristova (Johns Hopkins) Graeme Milligan (Glasgow)	*What kind of microscopies do we have that people are not aware of? What kind of microscopy are we missing and what (realistic) features should it present?*
15:40 – 16:40	**Coffee Break and Second Poster Viewing Session**	
	SESSION 4 (KIRC 1150) **Chair: Vali Raicu** (University of Wisconsin-Milwaukee)	
16:40 – 17:10	**Keynote 6** **Anne Kenworthy** (University of Virginia School of Medicine)	*High-content imaging platform to discover chemical modulators of plasma membrane rafts*
17:10 – 17:20	Keynote 6 Q & A	
17:20 – 17:30	**Selected Poster Talks (SPTs)** **(5-minute talks & questions)** **Sabita Sarma** (UW-Milwaukee) **Dammar Badu** (UW-Milwaukee)	*Talin R8 domain… response to force …* *Refinement of FRET spectrometry…*
17:30	Recombobulating and walking to reception	
18:00 - 21:15 **21:30**	**SYMPOSIUM RECEPTION and DINNER** Location: The Zelazo Center for the Performing Arts **Limousine shuttle departs for Hyatt Place**	

Milwaukee Symposium – Day 2: Friday, 26 August 2022

UW-Milwaukee, Kenwood IRC – 3135 North Maryland Ave., Milwaukee, WI

07:45 – 08:30	**BREAKFAST**	
	SESSION 5 (KIRC Room 1150) **Chair: Anne Kenworthy** (University of Virginia School of Medicine)	
8:30 – 9:00	**Keynote 7** **Graeme Milligan** (University of Glasgow)	*The in situ quaternary organisation of M1 muscarinic receptors*
9:00 – 9:10	Keynote 7 Q & A	
9:10 – 9:40	**Keynote 8** **Michael Stoneman** (University of Wisconsin-Milwaukee)	*Combination of FRET spectrometry and molecular dynamics simulations to probe receptor quaternary structure*
9:40 – 9:50	Keynote 8 Q & A	
9:50 – 10:30	**Coffee Break and Third Poster Viewing Session**	
10:30 – 11:10	**General Discussion** Instigated by: Catherine Royer (Rensselaer) Vali Raicu (UW-Milwaukee)	*A. What kind of errors do we encounter in fluorescence fluctuation spectroscopies?* *B. What are some less-known errors in FRET?*
	SESSION 6 (KIRC Room 1150) **Chair: Kalina Hristova** (Johns Hopkins University)	
11:10 – 11:40	**Keynote 9** **Claudiu Gradinaru** (University of Toronto at Mississauga)	*Ligand-Biased Conformations of the A2A Adenosine Receptor Revealed by Single-Molecule Fluorescence*
11:40 – 11:50	Keynote 9 Q & A	
11:50 – 12:20	**Keynote 10** **Taras Pogorelov** (University of Illinois at Urbana-Champaign)	*Signaling through cellular membrane: capturing dynamic interactions of RTKs*
12:20 – 12:30	Keynote 10 Q & A	
12:30 – 13:30	**LUNCH** – Served in KIRC 1140 Seating in KIRC 1130 and 1160	

B. RIIO Alliance 3rd General Assembly Meeting (Guests are welcome!)

Friday, 26 August 2022

UW-Milwaukee, Kenwood IRC – 3135 North Maryland Ave., Milwaukee, WI

RIIO ASSEMBLY Meeting of Members and Guests **KIRC Room 1150** **Chair: Graeme Milligan** (University of Glasgow)		
13:30 – 14:00	**RIIO Director Report** **Vali Raicu** (UW-Milwaukee)	*Scientific and technology report*
14:00 – 14:10	Q & A/Discussion	
14:10 – 14:40	**Updates by Alliance Members** Everyone is invited to bring a couple of slides with news to share	*Successful grant applications, high impact papers, new instruments planned, new methods, etc.*
14:40 – 15:00	**Oral presentation** **Alexander Arnold** (UW-Milwaukee)	*Drug Discovery in Milwaukee (MIDD)*
15:00 – 15:40	**Tour of the UWM Biophysical Microspectroscopy Facility**	
15:40 – 16:30	**COFFEE and Planning/Brainstorming Session**	
16:30 – 16:45	**Closing Remarks**	