



**The 27<sup>th</sup> Annual International Conference on**

# **Magnetic Resonance Angiography**

**Cincinnati, Ohio  
2015**



# Program at a Glance

## Educational Workshop

Time	Tuesday, September 15th, 2015
08:30 - 08:45	Introduction
08:45 - 10:45	Session 1: Basics
10:45 - 11:05	Coffee Break
11:05 - 12:35	Session 2: Contrast Enhanced MRA
12:35 - 14:00	Lunch
14:00 - 15:45	Session 3: Head, Neck and Heart
15:45 - 16:05	Coffee Break
16:05 - 18:05	Session 4: Body and Peripheral
18:05	Welcome Reception

## Scientific Sessions

Time	Wednesday, September 16th, 2015
08:30 - 09:15	Welcome and Plenary Talk
09:15 - 10:30	Session 1: Contrast Enhanced MRA, Part 1
10:30 - 11:00	Coffee Break
11:00 - 12:15	Session 2: New Techniques Part 1
12:15 - 13:45	Lunch
13:45 - 15:15	Session 3: Cardiac, Part 1
15:15 - 15:45	Coffee Break
15:45 - 17:30	Session 4: Quantitative Flow
17:50	Trolley leaves for Zoo

Time	Thursday, September 17th, 2015
08:45 - 10:30	Session 5: Contrast Enhanced MRA, Part 2
10:30 - 11:00	Coffee Break
11:00 - 12:10	Session 6: Poster Blitz!
12:10 - 13:30	Lunch
13:30 - 15:00	Poster Sessions 1 & 2
15:00 - 16:30	Session 7a: Ferumoxytol
16:30 - 16:50	Coffee Break
16:50 - 18:00	Session 7b: Ferumoxytol
18:10	Buses Board for Ballpark

Time	Friday, September 18th, 2015
08:45 - 10:30	Session 8: New Techniques, Part 2
10:30 - 11:00	Coffee Break
11:00 - 12:15	Session 9: Non-Contrast MRA
12:15 - 13:45	Lunch
13:45 - 15:00	Session 10: Cardiac, Part 2
15:00 - 15:30	Coffee Break
15:30 - 17:15	Session 11: Vessel Wall
17:15 - 17:55	Closing Remarks
18:00	Buses Board for Hofbräuhaus

# Welcome

## Welcome colleagues and companions to the 27th annual meeting of the MR Angiography Working Group!!



It is my pleasure to welcome you to the historic American city of Cincinnati, where under the direction of the local organizer and president-elect Chuck Dumoulin, we have prepared what we believe will be a most enjoyable, hospitable, and intellectually stimulating several days for you.

While the sights outside the door may not quite compare to those of Rome last year, I am particularly pleased with our choice of venue at the Kingsgate Marriott, where our group can continue in the tradition of the MRAWG to comfortably mingle during breaks and meals and beyond, visit with our generously supportive vendors (please do!), and of course listen to our associates' presentations and engage them in lively discussion.

Once again this year we are pleased to be holding a pre-conference workshop (Tuesday) where attendees can learn basics and beyond from the experts, and receive CME credit. The workshop itself officially kicks off Wednesday morning, lasting 3 full days and ending Friday afternoon. I am very pleased with the number and caliber of talks planned, including a session dedicated entirely to ferumoxytol, and a good number of students and early trainees who will be vying for the coveted Potchen and Passariello awards. The 4 minute poster presentations should not be missed.

And of course, no MRAWG would be complete without a vibrant social program. Following the pre-conference on Tuesday will be an opening reception right outside at the Kingsgate - easy. Wednesday evening we can walk (it's not far) or take a shuttle to the Cincinnati Zoo for animal viewing and food and drink "in the wild". Perhaps this can whet our appetite for South Africa in 2017! Thursday we head to the beautiful Cincinnati Reds baseball stadium and a fabulous luxury venue overlooking the field and city - kind of an American "castle" of sorts. While there unfortunately won't be a baseball game (Chuck didn't have that kind of pull), I am sure there will be some fun baseball-related activities, not to mention a lofty atmosphere for socializing and intellectual kibitzing (oh yeah, + food and drink!). Finally, on Friday night we head over to the Hofbräuhaus across the Ohio River in Newport, Kentucky, for an evening of German food and beer in the garden ... this on the opening night of Oktoberfest in Cincinnati, which I am told is the largest outside of Germany. Following dinner, for those of you brave enough, the streets of downtown Cincinnati (a short walk back over the river) will be roped off as the whole town takes to the streets to pretend they are in Munich. I plan to be there - hope you will too.

On behalf of myself and our host who did most of the work, Chuck Dumoulin and his hard-working team, I wish you all a rewarding and productive time here in Cincinnati.

A handwritten signature in blue ink, appearing to read 'Jeffrey Maki'.

Jeffrey Maki, MD, PhD  
President MRAWG

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# Educational Schedule

## Educational Workshop Tuesday, September 15<sup>th</sup>, 2015

### Session 1: Basics

*Chairs: Steve Riederer and Michael Markl*

8:30 – 8:45	<b>Introduction and Welcome</b>	Chuck Dumoulin, Rob Fleck
8:45 – 9:15	<b>The essential ingredients for creating MRA image contrast</b>	Tom Grist
9:15 – 9:30	<b>Basics of Physiologic flow</b>	Denis Doorly
9:30 – 9:45	<b>MRA basics (TOF, CE-MRA and PC-MRA)</b>	Michael Markl
9:45 – 10:00	<b>Introduction to K-space</b>	Frank Korosec
10:00 – 10:15	<b>Characterization of Physiology with T1, T2 and T2*</b>	Graham Wright
10:15 – 10:30	<b>Phase Contrast MRI</b>	Oliver Wieben
10:30 – 10:45	<b>Discussion</b>	
10:45 – 11:05	<b>Break</b>	

### Session 2: Contrast Enhanced MRA

*Chairs: Martin Prince and Tom Grist*

11:05 – 11:20	<b>Contrast Agents</b>	Greg Wilson
11:20 – 11:35	<b>Dynamic Contrast-Enhanced (CE) MRA</b>	Steve Riederer
11:35 – 11:50	<b>Contrast injection strategies for CE MRA</b>	Jeff Maki
11:50 – 12:05	<b>mDixon CE MRA</b>	Eric Stinson
12:05 – 12:20	<b>MRA with Ferumoxytol</b>	Paul Finn
12:20 – 12:35	<b>Discussion</b>	
12:35 – 14:00	<b>Lunch</b>	

**CME and ARRT CEU Credits will be available to those attending the Educational Session.**

# Educational Schedule

## Educational Workshop Tuesday, September 15<sup>th</sup>, 2015

### Session 3: Head, Neck and Heart

*Chairs: Scott Reeder and Kevin DeMarco*

14:00 – 14:15	<b>Vascular imaging/angiography in stroke and other vascular dementias</b>	Richard Frayne
14:15 – 14:30	<b>"Clinical" carotid plaque MR imaging</b>	Kevin DeMarco
14:30 – 14:45	<b>MRI of atherosclerotic vessel walls</b>	Niranjan Balu
14:45 – 15:00	<b>Coronary MRA and coronary plaque imaging</b>	Debiao Li
15:00 – 15:15	<b>Blood oxygenation</b>	Pascal Spincemaille
15:15 – 15:30	<b>MRA and future neuro interventions</b>	Wally Block
15:30 – 15:45	<b>Discussion</b>	
15:45 – 16:05	<b>Break</b>	

### Session 4: Body and Peripheral

*Chairs: Graham Wright and James Meaney*

16:05 – 16:20	<b>Pulmonary MRA</b>	Robert Fleck
16:20 – 16:35	<b>Renal and Skin MRA</b>	Martin Prince
16:35 – 16:50	<b>AVMs, Trauma and Veins</b>	Giles Roditi
16:50 – 17:05	<b>4D flow MRA in the abdomen</b>	Scott Reeder
17:05 – 17:20	<b>Lower extremity contrast enhanced MRA</b>	James Meaney
17:20 – 17:35	<b>Advances in QISS Non-Enhanced MR Angiography</b>	Robert Edelman
17:35 – 17:50	<b>Peripheral MRA - going beyond the lumen</b>	James Carr
17:50 – 18:05	<b>Discussion</b>	
18:05 – 21:00	<b>Welcome Reception at the Marriott</b>	

**CME and ARRT CEU Credits will be available to those attending the Educational Session.**

# Scientific Sessions

Wednesday, September 16<sup>th</sup>, 2015

## Welcome and Plenary Talk

8:30 – 8:45	Introduction and Welcome	Chuck Dumoulin, Jeff Maki
8:45 – 9:15	Plenary talk: Disruptive Opportunities in Vascular MRI	Bob Edelman

## Session 1: Contrast Enhanced MRA, Part 1

9:15 – 9:30	Bracco Gold Sponsor Talk: Optimizing Bolus Injection of Gd-Based Contrast Agents for MR Angiography	Jeff Maki	
9:30 – 9:45	The Safety and Efficacy of Pediatric Contrast Enhanced Magnetic Resonance Angiography using Multihance (Gadobenate Dimeglumine)	Sarah Khan	★
9:45 – 10:00	Combined low-dose time-resolved and single-phase high resolution spinal CE MRA: evaluation of spinal vascular malformation	Bum-Soo Kim	
10:00 – 10:15	The impact of intensive training in inexperienced observers on analysis of stenosis and global atheroma burden in whole-body magnetic resonance angiography	Jonathan Weir-McCall	★
10:15 – 10:30	Guerbet Gold Sponsor Talk: Current Understanding of Gd Deposition	Alex Towbin	
10:30 – 11:00	Break		

## Session 2: New Techniques, Part 1

11:00 – 11:15	Robust and Efficient Estimation of Optimum Perfusion Parameters in Dynamic Contrast-Enhanced MRI of the Prostate	Soudabeh Kargar	★
11:15 – 11:30	3D black-blood thrombus imaging (BTI) for the diagnosis of deep vein thrombosis	Guoxi Xie	
11:30 – 11:45	3D Black-blood Thrombus Imaging (BTI) for the Diagnosis of Cerebral Venous Thrombosis	Zhaoyang Fan	
11:45 – 12:00	Characterization of Atherosclerotic Disease in the Thoracic Aorta: A 3D Multicontrast Vessel Wall Imaging Study	Changwu Zhou	★
12:00 – 12:15	GE Gold Sponsor Talk: Advances in MR Angiography	James Holmes	
12:15 – 13:45	Lunch		

# Scientific Sessions

Wednesday, September 16<sup>th</sup>, 2015

## Session 3: Cardiac, Part 1

13:45 – 14:00	<b>Use of T1 map in acute myocardial infarction: can it distinguish between infarct area and area-at-risk?</b>	Iacopo Carbone	
14:00 – 14:15	<b>T1 estimation from 3D late gadolinium enhancement: Application to left atrial LGE</b>	Dana Peters	
14:15 – 14:30	<b>Relationship between Ventricular Diastolic Dysfunction and Atrial Fibrosis: a study of phasic left ventricular and atrial volumes, and atrial late gadolinium enhancement</b>	Karl Grunseich	★
14:30 – 14:45	<b>Free-Breathing 3D Whole-Heart Coronary MRA Using Respiratory Motion-Resolved Sparse Reconstruction</b>	Davide Piccini	★
14:45 – 15:00	<b>Coronary Vein Imaging by MRI vs Intra-Procedural X-Ray Venography for Targeted Left Ventricular Lead Placement in Cardiac Resynchronization Therapy</b>	Adrian Lam	★
15:00 – 15:15	<b>Greater non-compacted myocardial mass index in patients with clinically significant LVNC</b>	Jeremy Collins	
15:15 – 15:45	<b>Break</b>		

# Scientific Sessions

Wednesday, September 16<sup>th</sup>, 2015

## Session 4: Quantitative Flow

15:45 – 16:00	<b>4D flow MRI for intracranial hemodynamic assessment in Alzheimer’s disease</b>	Leonardo Rivera	★
16:00 – 16:15	<b>PC-MRI based simulation of contrast-injection in cerebral aneurysms</b>	Vitaliy Rayz	
16:15 – 16:30	<b>Absolute Local Normalized Helicity in Patients with Bicuspid Valve and Aortic Dilatation</b>	Julio Garcia	★
16:30 – 16:45	<b>Left Atrial 4D Flow MRI: Stasis and Velocity Mapping in Patients with Atrial Fibrillation</b>	Michael Markl	
16:45 – 17:00	<b>Differences between 4D flow, 2D One-directional and 2D Three-directional Velocity-encoded MRI Sequences for the Estimation of Aortic Flow and Velocity</b>	Emilie Bollache	★
17:00 – 17:15	<b>Turbulence tensor quantification using ICOSA6 flow encoding</b>	Henrik Haraldsson	
17:15 – 17:30	<b>High Resolution 4D Flow and CE-MRA utilizing Ultrashort Echo Times: Feasibility of linking Vessel Wall Enhancement, Morphology, and Hemodynamics</b>	Kevin Johnson	
17:30	<b>Announcements</b>		
17:50 – 22:00	<b>An evening at the Cincinnati Zoo</b>		

# Scientific Sessions

Thursday, September 17<sup>th</sup>, 2015

## Session 5: Contrast Enhanced MRA, Part 2

8:45 – 9:00	<b>Identifying Motion Corruption in DCE Radial Stack of Stars Data</b>	Jason Mendes	
9:00 – 9:15	<b>Very Short Blood T2* with Gd-based Contrast Reagents: Investigating BMS Shift</b>	Gregory Wilson	
9:15 – 9:30	<b>DESIRE: Efficient MRI reconstruction with Split Bregman initialization and sparse regularization based on pre-learned dictionary</b>	Artem Migukin	
9:30 – 9:45	<b>Vessel- and Dose-specific Differences in Contrast-enhanced Time-resolved 4D-MRA: An Intra-individual Quantitative and Qualitative Comparison of Gadopentetate Dimeglumine and Gadobutrol in Minipig</b>	Vera Keil	★
9:45 – 10:00	<b>Accelerated Time Resolved Contrast Enhanced MRA of Dural Arteriovenous Fistulas using Highly Constrained Reconstruction of Sparse Cerebrovascular Datasets</b>	Zachary Clark	★
10:00 – 10:15	<b>Bayer Gold Sponsor Talk: Two International, Multicenter Phase 3 Studies Evaluating both the Assessability and Quantitative Accuracy of Contrast Enhanced MRA using Gadobutrol compared to ToF MRA in Supra-Aortic and Renal Arteries</b>	Jacob Agris	
10:15 – 10:30	<b>Philips Gold Sponsor Talk: Advances in DIXON Contrast Enhanced MRA</b>	Marc Kouwenhoven	
10:30 – 11:00	<b>Break</b>		

# Scientific Sessions

Thursday, September 17<sup>th</sup>, 2015

## Session 6: Poster Blitz!

11:00 – 11:05	<b>Introduction and Ground Rules</b>		
11:05 – 11:10	<b>Classification of human peripheral arterial atherosclerotic plaques with T2 and Ultra-short echo time MRI</b>	Trisha Roy	★
11:10 – 11:15	<b>Global measures of myocardial strain predict infiltrative cardiomyopathy at heart deformation analysis: A feasibility study at 1.5T</b>	Marcos Ferreira Botelho	★
11:15 – 11:20	<b>Dynamic MR Imaging of Carotid Webs</b>	Mari E. Boesen	★
11:20 – 11:25	<b>In vivo Cardiac Blood Oxygen Saturation Mapping using Quantitative Susceptibility Mapping</b>	Yan Wen	★
11:25 – 11:30	<b>High Resolution Whole Heart Coronary Plaque Characterization with Integrated Anatomical Reference</b>	Yibin Xie	★
11:30 – 11:35	<b>Patient-specific 3D printed models of the aorta for pre-procedural planning in transcatheter aortic valve replacement: A proof of concept study</b>	Beth Ripley	★
11:35 – 11:40	<b>Application of Full Turbulent Tensor in Estimation of MR-Based Relative Pressure</b>	Sarah Kefayati	★
11:40 – 11:45	<b>Feasibility of time-of-flight MR angiography in human pregnancy for imaging the fetal and placental vasculature</b>	Uday Krishnamurthy	★
11:45 – 11:50	<b>A 9 Channel Carotid Coil Designed for Integration with Clinical Head coils</b>	Michael J. Beck	★
11:50 – 11:55	<b>Fusion of Ferumoxytol MRA and Non-Contrast CT in TAVR Planning</b>	Takegawa Yoshida	★
11:55 – 12:00	<b>Estimating brain distensibility with quantitative magnetic resonance cerebrospinal fluid flow measurements</b>	Annamarie T. Helpling	★
12:00 - 12:05	<b>Arm position alters the geometry of Brachial artery and Basilic vein</b>	Connor Macdonald	★
12:05 - 13:30	<b>Lunch</b>		

# Scientific Sessions

Thursday, September 17<sup>th</sup>, 2015

## Poster Session 1

13:30 – 14:15

<b>Classification of human peripheral arterial atherosclerotic plaques with T2 and Ultra-short echo time MRI</b>	Trisha Roy	★
<b>Global measures of myocardial strain predict infiltrative cardiomyopathy at heart deformation analysis: A feasibility study at 1.5T</b>	Marcos Ferreira Botelho	★
<b>Dynamic MR Imaging of Carotid Webs</b>	Mari E. Boesen	★
<b>In vivo Cardiac Blood Oxygen Saturation Mapping using Quantitative Susceptibility Mapping</b>	Yan Wen	★
<b>High Resolution Whole Heart Coronary Plaque Characterization with Integrated Anatomical Reference</b>	Yibin Xie	★
<b>Patient-specific 3D printed models of the aorta for pre-procedural planning in transcatheter aortic valve replacement: A proof of concept study</b>	Beth Ripley	★
<b>MR Evaluation of the Cerebrovasculature in the Neonatal ICU</b>	Jean Tkach	
<b>Ferumoxytol across the Age Spectrum: a Single Center Experience of Safety</b>	Kim-Lien Nguyen	
<b>Black-Blood Late Gadolinium-Enhancement MR Imaging of Myocardium</b>	Gregory Wilson	
<b>Assessment of tortuosity and flow in abdominal aortic aneurysms with ferumoxytol-enhanced magnetic resonance imaging</b>	Farshid Faraji	
<b>Signal intensity measurement of the liver vessels in patients suffering from liver lesions with Gd-Eob-DTPA and Gd-BOPTA enhanced MRI/ MRA</b>	Manuela Aschauer	

# Scientific Sessions

Thursday, September 17<sup>th</sup>, 2015

## Poster Session 2

14:15 – 15:00	<b>Diffuse myocardial fibrosis in diabetes mellitus type-II (DM-II) assessed by Cardiac Magnetic Resonance T1 mapping technique: preliminary results.</b>	Federica Ciolina	
	<b>Application of Full Turbulent Tensor in Estimation of MR-Based Relative Pressure</b>	Sarah Kefayati	★
	<b>Feasibility of time-of-flight MR angiography in human pregnancy for imaging the fetal and placental vasculature</b>	Uday Krishnamurthy	★
	<b>A 9 Channel Carotid Coil Designed for Integration with Clinical Head coils</b>	Michael J. Beck	★
	<b>Fusion of Ferumoxytol MRA and Non-Contrast CT in TAVR Planning</b>	Takegawa Yoshida	★
	<b>Estimating brain distensibility with quantitative magnetic resonance cerebrospinal fluid flow measurements</b>	Annamarie T. Helping	★
	<b>Arm position alters the geometry of Brachial artery and Basilic vein</b>	Conor Macdonald	★
	<b>Free-Breathing Non-Contrast Pulmonary MRA in the Neonatal ICU</b>	Jean Takch	
	<b>Quantification of myocardial motion patterns in patients with hypertrophic- and dilated-cardiomyopathy using heart deformation analysis</b>	Kai Lin	
	<b>Linear sign in cystic brain lesions <math>\geq</math> 5mm on T2-weighted images and time-of-flight MR angiography: A suggestive feature of enlarged perivascular space on 3.0-T MR imaging</b>	Bum-Soo Kim	
	<b>Single Breath-Hold Real-Time Cardiac Cine MR for Evaluation of Left Ventricular Function</b>	Tomoyuki Kido	
	<b>Carotidynia MRI imaging findings</b>	George Bolotin	

# Scientific Sessions

Thursday, September 17<sup>th</sup>, 2015

## Session 7a: Ferumoxytol

15:00 – 15:10	<b>Steady-state ferumoxytol enhanced magnetic resonance angiography of the lower extremities provides optimal characterization of vascular lesions for peripheral arterial disease patients with renal failure</b>	Evan Lehrman	
15:10 – 15:20	<b>Ferumoxytol enhanced Magnetic Resonance Angiography in stage 4 and 5 Chronic Kidney Disease</b>	Alex Vesey	★
15:20 – 15:30	<b>Ferumoxytol in TAVR Workup</b>	Paul Finn	
15:30 – 15:40	<b>Ferumoxytol MRA as an Alternative to CTA for Common Chest Indications: TAVR and Pulmonary Embolism</b>	Michael Hope	
15:40 – 15:50	<b>DARC-MR Lymphangiography Using a Combination of Gadolinium and USPIO Contrast: an Update</b>	Jeffrey H. Maki	
15:50 – 16:00	<b>Ferumoxytol in Pediatric Congenital Heart Disease: Early Results with 4D Multiphase Steady State Imaging with Contrast (MUSIC) Enhancement</b>	Kim-Lien Nguyen	
16:00 – 16:10	<b>Adverse reactions to intravenous administration of ferumoxytol intended for use as magnetic resonance imaging contrast</b>	Alex Vesey	★
16:10 – 16:30	<b>Discussion</b>		
16:30 -- 16:50	<b>Coffee Break</b>		

# Scientific Sessions

Thursday, September 17<sup>th</sup>, 2015

## Session 7b: Ferumoxytol

16:50 – 17:00	<b>Ferumoxytol MRA: Minimizing Table Time in Claustrophobic Patients</b>	Paul Finn	
17:00 – 17:10	<b>Ferumoxytol-Enhanced Motion-Corrected Accelerated 4D Flow MRI as a Single Sequence Congenital Heart Disease Exam: Validation of Functional and Segmental Analysis</b>	Joseph Cheng	★
17:10 – 17:20	<b>Accelerated Four-dimensional, Multi-phase, Steady-state Imaging with Contrast Enhancement using Parallel Imaging and Compressed Sensing</b>	Ziwu Zhou	★
17:20 – 17:30	<b>Cardiac and Respiratory Self-Gated 4D Multi-phase Steady-state Imaging with Ferumoxytol Contrast (MUSIC)</b>	Fei Han	★
17:30 – 17:40	<b>Quantitative myocardial perfusion with dynamic ferumoxytol enhanced MRI</b>	Aleksandra Radjenovic	
17:40 – 17:50	<b>Flip-Angle optimization in Ferumoxytol-MRA: Preliminary results using different dose schemes and comparison with Gadobenate-MRA</b>	Tilman B. Schubert	
17:50 – 18:00	<b>Discussion</b>		
18:00	<b>Announcements</b>		
18:10	<b>Board busses for the banquet at the ballpark</b>		

# Scientific Sessions

Friday, September 18<sup>th</sup>, 2015

## Session 8: New Techniques, Part 2

8:45 – 9:00	<b>Time of Arrival Parametric Mapping derived from Fast High Resolution Whole Brain Contrast Enhanced 4D MRA improves the anatomic display of contrast kinetics in patients with brain vascular malformations.</b>	Tilman B. Schubert
9:00 – 9:15	<b>Intracranial Dual-Venc 4D flow MRI at 7T</b>	Susanne Schnell
9:15 – 9:30	<b>Comprehensive Cerebrospinal Venous Assessment in Patients and Healthy Controls – Results from CCSVI Study</b>	Eric M Schrauben
9:30 – 9:45	<b>Evaluation of the renal arterial wall with High Resolution MR imaging after endovascular renal denervation</b>	Salim Si-mohamed
9:45 – 10:00	<b>Flow induced artifacts in two-point Dixon fat-water separation: Incidence and potential diagnostic pitfalls</b>	Tilman B. Schubert
10:00 – 10:15	<b>Compact 3T Scanner: Initial Experience with 80 mT/m, 700 T/m/s Gradients</b>	Matt A. Bernstein
10:15 – 10:30	<b>Contrast-Enhanced Perianal Fistula Imaging with Dixon-Based Fat Suppression</b>	Eric Stinson 
10:30 – 11:00	<b>Break</b>	

## Session 9: Non-contrast MRA

11:00 – 11:15	<b>Revisit of Non-Contrast Aortic Arch FBI at 3T</b>	Mitsue Miyazaki
11:15 – 11:30	<b>7-Minutes Fresh Blood Imaging using Variable TR and Variable Refocusing Flip Angle for Non-Contrast Peripheral MR Angiography at 3T</b>	Xiangzhi Zhou
11:30 – 11:45	<b>Breath-hold Inner-Volume Radial Quiescent-Interval Slice-Selective (QISS) of the Heart, Aorta and Renal Arteries</b>	Robert R. Edelman
11:45 – 12:00	<b>Quiescent-Interval Slice-Selective Fast Low-Angle Shot Magnetic Resonance Angiography of the Extracranial Carotid Arteries</b>	Ioannis Koktzoglou
12:00 – 12:15	<b>Siemens Gold Sponsor Talk: Trends in MRA</b>	Shiv Giri
12:15 – 13:45	<b>Lunch</b>	

# Scientific Sessions

## Session 10: Cardiac, Part 2

- |               |  |                      |
|---------------|--|----------------------|
| 13:45 – 14:00 | <b>Non-Contrast Myocardium Perfusion: Technical Differences between 4D Time-SLIP with Tagging Aortic Root and FAIR</b>                     | Mitsue Miyazaki      |
| 14:00 – 14:15 | <b>Characteristic Streak Frequency Filtering with Modulo-Prime Spokes (MoPS) Cine-CMR</b>  | Keigo Kawaji         |
| 14:15 – 14:30 | <b>A qualitative assessment of first-pass perfusion bolus timings in the assessment of myocardial ischemia: A magnetic resonance study</b> | Jonathan Weir McCall |
| 14:30 – 14:45 | <b>Longitudinal assessment of renal perfusion and oxygenation in transplant donor-recipient pairs using ASL and BOLD MRI</b>               | Sean Fain            |
| 14:45 – 15:00 | <b>A Paradigm Shift in Cardiac MRI? Motion Reconstruction Rather Than Motion Correction</b>  | Matthias Stuber      |
| 15:00 – 15:30 | <b>Break</b>   |                      |

# Scientific Sessions

## Session 11: Vessel Wall

15:30 – 15:45	<b>High resolution MRI for characterization of inflammation within abdominal aortic aneurysm</b>	Chengcheng Zhu	★
15:45 – 16:00	<b>Motion insensitive Carotid Artery Wall Imaging Using Stack of Stars technique and Inversion Recovery preparation (3D IR-Prep-SOS)</b>	Seong-Eun Kim	
16:00 – 16:15	<b>3D Black Blood VISTA Magnetic Resonance Vessel Wall Imaging of the Thoracic Aorta in Young, Healthy Adults: Reproducibility and Implications for Efficacy Trial Sample Sizes</b>	Tim Leiner	
16:15 – 16:30	<b>Intracranial Vessel Wall MR Registry</b>	Qi Yang	
16:30 – 16:45	<b>Intracranial Vessel Wall Imaging at 3T and 7T</b>	David Saloner	
16:45 – 17:00	<b>Evaluation of Dissecting Aneurysm Wall of Vertebral Artery Using 3T MRI</b>	Keiji Igase	
17:00 – 17:15	<b>Carotid plaque permeability measured by high and low molecular weight contrast</b>	Jason Mendes	
17:15 – 17:55	<b>Closing Remarks</b> <ul style="list-style-type: none"><li>- Meeting wrap up</li><li>- Announcement of the Potchen Award and runners up</li><li>- Announcement of the Passariello Award and runners up</li><li>- An invitation to attend the 28<sup>th</sup> annual meeting in Chicago</li><li>- Thanks and recognition</li></ul>	Jeff Maki	
18:00	<b>Evening Event -- Dinner at the Hofbräuhaus, Newport, Kentucky</b>		

# Presentation Guidelines

## Oral Presentations

Oral Presentations will be 12 minutes long. Each talk will be followed by a 3 minute question/answer period. Presentations should be prepared using PowerPoint and be formatted using a 16x9 aspect ratio to ensure maximum use of projectors. Presentations with a 4x3 aspect ratio will be acceptable, but the projectors will leave margins on either side of the slide. Both PC and Mac computers will be available for presentations.

### Important note:

Sessions 7a and 7b on Thursday afternoon will be dedicated to Ferumoxytol (September 17, 3:00PM – 6:00PM). If your presentation is during Session 7a or 7b then please know that your talk must be 10 minutes long. Questions for talks in the Ferumoxytol sessions will be deferred to a discussion period at the end of each session.

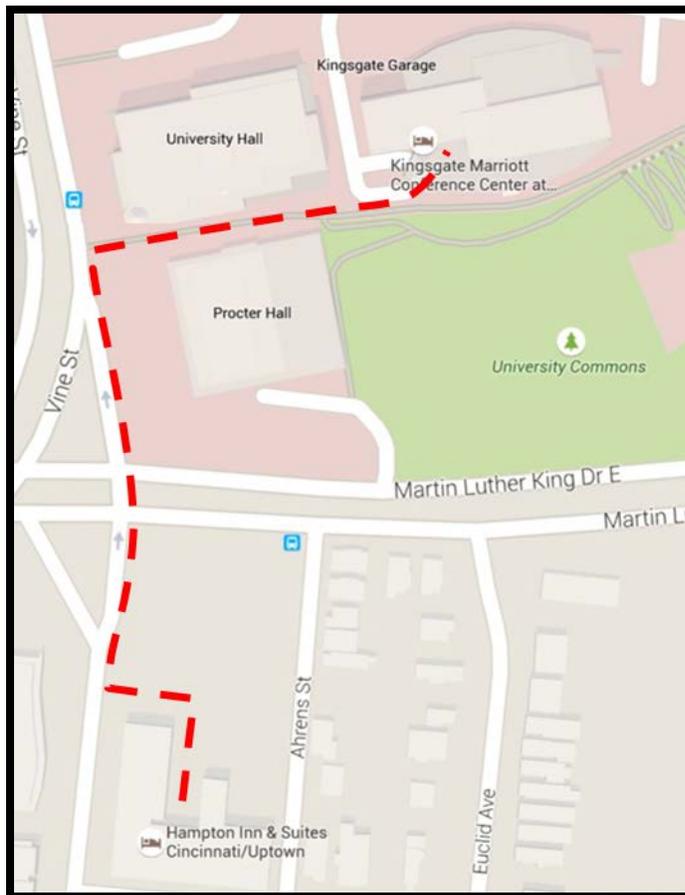
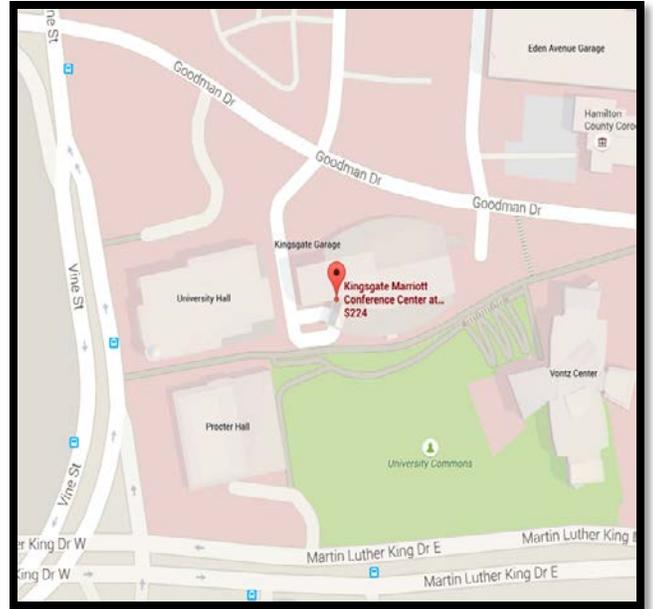
## Poster Presentations

Posters must fit within a 4 foot x 4 foot (i.e. 122cm x 122 cm) area for mounting (tacks will be provided). Posters will be put up at the beginning of the conference (Tuesday or Wednesday), and should be on display through Friday. Poster presenters are requested to stand in front of their posters during one of two poster presentation sessions on Thursday afternoon (1:30 – 2:15PM, or 2:15 – 3:00PM). Please consult the program to see which session you will be presenting.

Students/Trainees making a poster presentation are eligible for the Passariello Award for best poster. Student/Trainees are requested to prepare a 4 minute PowerPoint presentation to be given at the Poster Blitz on Thursday morning to entice viewers to their poster.

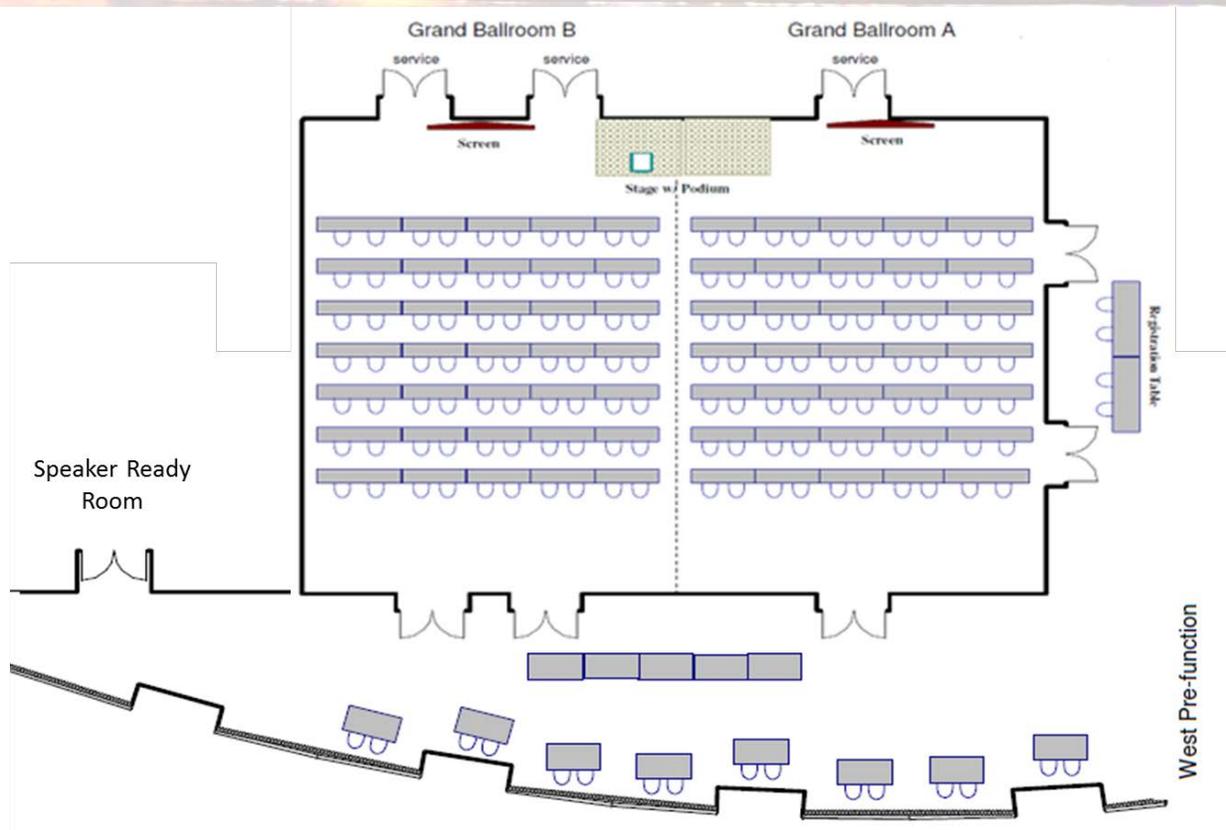
# Conference Venue

Kingsgate Marriott Conference Center at the University of Cincinnati  
151 Goodman Drive • Cincinnati, OH 45219



**Walk from Hampton Inn Suites to  
Kingsgate Marriott**  
Distance: 0.2 Miles Time: 4 Minutes

# Floor Plan



The Pre-Function Room will be where you can find the Corporate Sponsors Exhibit tables and the break areas.

The downstairs lobby area is where the posters will be located.

# Local Information



## Cincinnati/Northern Kentucky International Airport – CVG

Airport Phone: +1 859 586 0166

Kingsgate Marriott direction: 15 miles NE

- Bus service, fee: \$15 USD (one way)
- Estimated taxi fare: \$32 USD (one way)

### Top Rated Taxi Services:

Towne Taxi  
(513) 761-7700

Ron's Cab Service  
(513) 921-4222

Queen City Yellow Cab  
(513) 332-2862



<u>Cincinnati Weather</u>			
	Average High	Average Low	Average Precipitation
SEPT.	78	56	2.8



**NOTE: All of the social events are partially outdoors. Be prepared!**

# Social Events

## Tuesday, September 15<sup>th</sup>

Welcome Reception at the Kingsgate Marriott – the conference venue. The event will start at 6:05 p.m., at the end of the Educational Session. This casual gathering will feature tastes of Cincinnati including Cincinnati style chili, Goetta (a sausage invented in Cincinnati), Graeter’s Ice Cream and some great local beers.

## Wednesday, September 16<sup>th</sup>

Trolleys will take us from Kingsgate Marriott Conference Center to the Cincinnati Zoo & Botanical Garden, located at 3400 Vine Street, beginning at 5:50 p.m. where we will enjoy an evening on the Africa Deck & Patio overlooking the Africa savanna.



**Harapan, a Sumatran rhino, was born at the Cincinnati Zoo in 2007.** Ipuh, Harapan’s father, was believed to be one of the oldest Sumatran rhinos in captivity when he died. His body was preserved and is on display at the Cincinnati Museum Center.

The wild Sumatran rhino population has decreased by more than 50% in the past decade, which now makes them the most endangered large mammals on the planet. Risks include: poaching, encroachment, roads being built through habitats, and deforestation due to the palm oil industry.

**There are no more than 100 Sumatran rhinos left in the world and Harapan is the only Sumatran rhino in North America.**

Arrangements are being made for Harapan to be transported to Indonesia in spring or fall of 2015 because it’s his only chance to contribute to the survival of his species.

<http://cincinnati-zoo.org/conservation/crew/rhino-signature-project/sumatran-rhino/>



**Walk to the Zoo**

**NOTE:**  
To enter the zoo you **must cross Vine St.** on the pedestrian bridge!

**Distance:**  
0.5 miles

**Walk Time:**  
10 minutes



# Social Events

## Map of the Cincinnati Zoo

### BASE CAMP CAFE from Vine Street Village

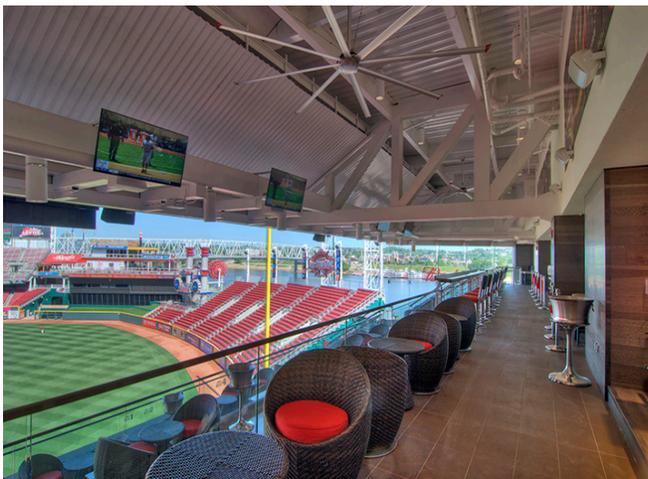


# Social Events

Thursday, September 17<sup>th</sup>

Buses will take us from Kingsgate Marriott Conference Center to the Great American Ball Park, home of the Cincinnati Reds, located at 100 Joe Nuxhall Way, beginning promptly at 6:05 p.m. We will start out the evening on the warning track behind home plate with some hors d' oeuvres. While there won't be a game on the field, there might be some baseballs nearby!

For dinner, we will head up to the Handlebar at the Riverfront Club for an upscale buffet and enjoy the beautiful view, second to none in the tri-state area.



# Social Events

Friday, September 18<sup>th</sup>

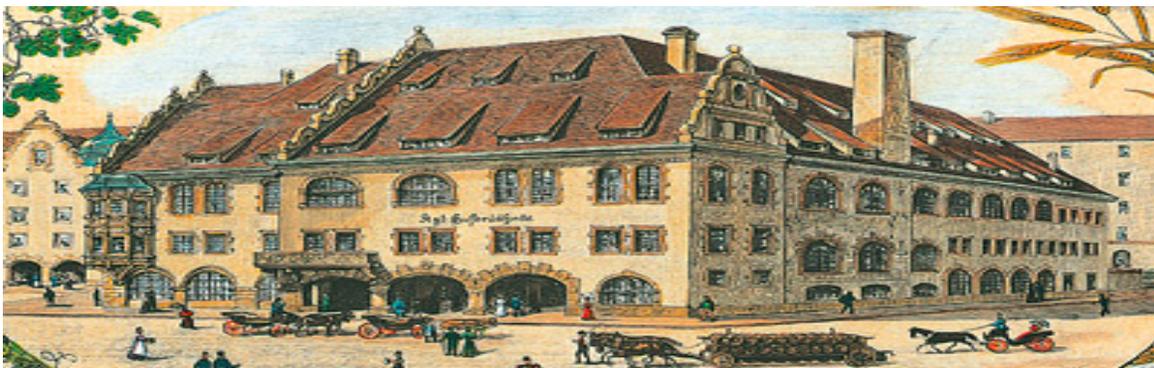
MRA Conference attendees will end the week at the first Hofbräuhaus outside of Germany, located at 200 East 3rd Street, Newport, KY. Buses will leave Kingsgate Marriott at 6:15 p.m. Our event will take place in a private section of the biergarten. Friday evening will be the first night of Oktoberfest in Cincinnati, and for those who want to join the festivities, it is only a short walk across the Ohio River on the "Purple People Bridge" to the heart of downtown.



The Hofbräuhaus Newport was modeled after the renowned 400+ year old Hofbräuhaus in Munich, Germany. Hofbräuhaus beer is brewed using original recipes handed down by the Duke of Bavaria, over 400 years ago.

A Brew Master oversees the brewing of four, all year round beer varieties, plus seasonal specialties like Oktoberfest, Maibock, Pilsner and Hefe Weizen Dunkel.

For more than a decade, Americans have enjoyed these fine beers in the Munich tradition. They are easy on the palate, yet tasty and refreshing.



# Spousal Program

## Day 1

9:15 Pickup at Kingsgate Marriott

Drive through quaint MainStrasse Village in Covington, KY. Learn about the German heritage of the Greater Cincinnati area. Hear famous folk tales of the Pied Piper and the Goose Girl.

Next stop is the Cathedral Basilica of the Assumption. The design of this church was inspired by the Notre Dame Cathedral in Paris. The north transept contains the world's largest handmade church stained glass window.

Next stop is the Roebling Flood Wall Murals. These 16 beautiful murals depict scenes from Covington's history from the 1800s to 2003. The site also offers beautiful views of the Roebling Suspension Bridge and Downtown Cincinnati.

Next we visit Riverside Drive, where gorgeous old mansions built by riverboat captains are located. Hear stories of the Underground Railroad, as well as the tragic story of the Garner's escape. We again see magnificent views of the Cincinnati skyline. Hear trivia and amazing tales about "Sin City" and its gambling past of bygone days in Newport, KY.

After a short drive crossing the much-navigated Ohio River, we re-enter Cincinnati. A drive up to Mt. Adams takes us to the Cincinnati Art Museum, where we have time for lunch in the award-winning café and briefly look around the museum.

After lunch, take a lovely drive around Mt. Adams, often referred to as a mini San Francisco, with a stop at the Vietnam Memorial next to President's Grove. Then it's on to downtown Cincinnati, Fountain Square, P & G Corporate Headquarters, the Taft Museum, the Mural of Cincinnati, Music Hall.

3:15 Drop off at Kingsgate Marriott

## Day 2

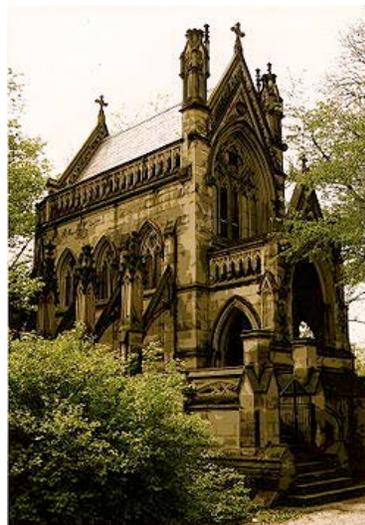
9:15 Pickup at Kingsgate Marriott

Take a walking tour of Findlay Market, Cincinnati's destination for fresh foods and interesting gifts.

From there, continue to newly redesigned Washington Park and the Over-the-Rhine neighborhood. Hear stories of the area and admire the fabulous architectural details. Eat lunch at your choice of OTR's many wonderful restaurants, several of which have been featured on Guy Fieri's Diners, Drive-ins and Dives on the Food Network.

After lunch, we take a drive to Spring Grove Cemetery and Arboretum, which took its inspiration from cemeteries such as Père Lachaise Cemetery in Paris and Mount Auburn Cemetery in Cambridge, MA. Tour the beautiful grounds, which include 12 ponds, many fine tombstones and memorials, and various examples of Gothic Revival architecture. Many species of National Champion trees are found here, as well.

3:15 Drop off at Kingsgate Marriott



# Organization

## Executive Committee

Jeffrey (Jeff) Maki – President, MRA Working Group, University of Washington

Matthias Stuber – Past-President, MRA Working Group, CIBM/CHUV/UNIL

Charles (Chuck) Dumoulin – Chair, MRA Working Group, Cincinnati Children's Hospital Medical Center

Robert Fleck – Co-Chair, MRA Working Group, Cincinnati Children's Hospital Medical Center

## Organizing Committee

Donna Lyons – Conference Manager, Cincinnati Children's Hospital Medical Center

Janette Wallace – Senior Conference Consultant, Roberts Research Institute

Shaina Turgeon – Conference Coordinator, Roberts Research Institute

## Abstract Review

Kevin DeMarco

Robert Edelman

Richard Frayne

Tom Grist

John Huston

Bum-soo Kim

Tim Leiner

Debiao Li

Michael Markl

Dennis Parker

Martin Prince

Steve Riederer

Giles Roditi

David Saloner

Mark Schiebler

Matthias Stuber

Paul Weavers

Oliver Wieben

Winfried Willinek

Graham Wright

Chun Yuan



## Local Volunteers

Deborah Brown

Barret Daniels

Dmitry Galandi

Sonya Harbin

Nara Higano

Chris Ireland

Vicki O'Shea

Tiah Robinson

Kimra Smith

Robby Thomen



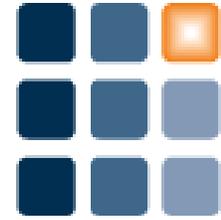
# Gold Sponsors

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Contrast for Life



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# PHILIPS



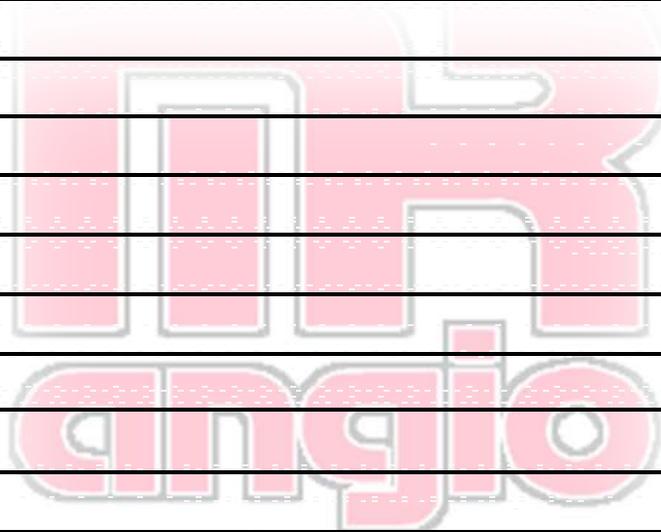
LIFE FROM INSIDE

# Other Sponsors





# Notes





# Notes



Magnetic Resonance Angiography  
28th Annual International Conference  
mraclub.com

**MRA**

# **Rising to New Heights Chicago 2016**

September 21st - 23rd  
Chicago, Illinois, USA

**Pre-conference Educational Workshop**  
September 20th

President: Charles (Chuck) Dumoulin  
Organizers: James Carr, Michael Markl