CMR 2022 will be the 22nd meeting convened since Elliott Lasser started the series in 1970. It is a unique opportunity to exchange up-to-date thoughts and new data in the field of contrast media in a collegial forum that includes both industry and academic researchers. We thank you for your science and your participation!
WELCOME TO ANNAPOLIS! WE HAVE CHOSEN THE CAPITAL OF MARYLAND AS THE SITE OF THIS YEAR'S CONFERENCE BECAUSE OF ITS CHARM, HISTORICAL APPEAL AND BEAUTIFUL WATERWAYS.

ANNAPOLIS IS THE GATEWAY TO NORTH AMERICA'S LARGEST ESTUARY, THE CHESAPEAKE BAY, AND IS UNDENIABLY A MARITIME DESTINATION RICH IN ON-THE-WATER ACTIVITIES. OFF THE WATER, ANNAPOLIS IS A LIVELY, UPBEAT, CONTEMPORARY CITY THAT SHOWCASES FOUR CENTURIES OF ARCHITECTURE AND EMBRACES 21ST-CENTURY LIVING, RICH WITH UNIQUE SHOPPING AND FINE DINING. STEEPED IN HISTORY AND ECLECTIC NEIGHBORHOODS, THE CITY OF ANNAPOLIS BOASTS A THRIVING CULTURAL SCENE AND A DOWNTOWN THAT MEETS AT THE WATER'S EDGE.

WHILE YOU ARE HERE, WE HOPE YOU HAVE TIME TO EXPERIENCE THIS SMALL TOWN THAT HAS NOT LOST ITS COLONIAL CHARM, THANKS TO ITS BRICK-PAVED STREETS AND BAYSIDE PATHS, AND MORE 18TH-CENTURY STRUCTURES THAN ANY OTHER CITY IN AMERICA.

MOST IMPORTANTLY, WE LOOK FORWARD TO HEARING YOUR TALK AND TO SEEING YOU AT THE PODIUM. WE ARE CERTAIN THAT THE LIVELY DISCUSSIONS AND INTERACTIONS WILL BE FANTASTIC. THANK YOU FOR BEING A PART OF CMR 2022.
CMR 2022 AGENDA

SUNDAY, AUGUST 21

Check-In and Registration at the Graduate Hotel 18:30–

19:30: Reception at the Federal House
22 Market Space, Annapolis, MD 21401
(410) 268-2576
MONDAY, AUGUST 22

7:30–8:30: Breakfast

8:30–9:00: Welcome and Introduction
by Jeff Bulte and Michael McMahon: CMR 2022 Conveners

Scientific Sessions at the Graduate Hotel 9:00–

11:00: CT Agents: Safety Studies and New Applications
Chairs: TBD

9:00-9:15  Paul Evans
Title TBD

9:15-9:30  Jennifer McDonald
Contrast agent substitution versus steroid pretreatment for preventing acute allergic-like reactions

9:30-9:45  Raman Akif
Prevention of post-contrast acute kidney injury in patients with advanced kidney disease

9:45-10:00  Ilona Dekkers
A systematic review of the incidence of hypersensitivity reactions and post-contrast acute kidney injury after ioversol: part 2-intra-arterial administration.

10:00-10:15  Elizabeth Rowe
A nephroprotective iodinated contrast agent with cardioprotective properties: A pilot study

10:15-10:30  Ketan Ghaghada
Interrogation of tumor microenvironment using nano-radiomics

10:30-11:00: Round Table Discussion

11:00-11:15: Coffee Break
11:15-13:15: MRI Agents: Safety and Biodistribution Studies

Chairs: TBD

11:15-11:30  Olivier Clement
Safety of contrast agents in clinical practice: is there a consensus between guidelines?

11:30-11:45  Carlo Quattrocchi
Skin Thickness of the Scalp in Multiple Sclerosis: Association with Linear versus Macroyclic Gadolinium-based Contrast Agents Administration.

11:45-12:00  Mariane Le Fur
Elemental imaging and speciation analysis of gadoterate in rat kidney samples

12:00-12:15  Cecile Factor
Gadolinium speciation in tissues. A general review on the current strategies and perspectives

12:15-12:30  Adrian Smith
Repeat and single dose administration of gadodiamide to rats up to one year

12:30-12:45  Clemens Guenther
Toxicity and behavioral assessment in mice following GBCA exposure in utero or in juveniles

12:45-13:15: Round Table Discussion

13:15-14:15: Lunch at the Graduate Hotel

14:15-16:15: Advances in MRI AGENTS I

Chairs: TBD

14:15-14:30  Michael McMahon
Optimizing imidazoles for dynamic contrast-enhanced CEST MRI urography

14:30-14:45  Linda Chaabane
Multicolor 19F-MRI with fluorinated probes to follow the immune system activation in vivo

14:45-15:00  Eric Ahrens
Functionalized fluorocarbon nanoemulsions for multimodal imaging of tumor-associated macrophages
15:00-15:15  Aparajita Bhattacharya
Engineering fluorinated thermo-responsive assembled protein (F-TRAP) for theranostic applications in glioblastoma multiforme

15:15-15:45: Round Table Discussion

15:45-16.15: Panel Discussion:
Recent Changes in FDA Regulations
Chairs: Elizabeth Rowe and TBD

16:15-16:30: Coffee Break

16:30-17:00 Torsten Almén Medal Award Lecture
Moderator: Carlo Quattrocchi

Eva Toth: “Metal Complexes in MRI:
Increasing Relaxivity and Stability”

19:00-20:30: Dinner at the Graduate Hotel

TUESDAY, AUGUST 23

7:30-8:30: Breakfast

8:30-10:30: Multimodal and Theranostic Imaging Agents
Chairs: TBD

8:30-8:45  Jeff Bulte
Pass the aspirin: Self-assembled nanotheranostics for CEST MRI, Raman imaging, and cancer therapy
8:45-9:00
Jacques Lux
A novel microbubble platform for cancer immunotherapy: Using MUSIC to activate the STING pathway

9:00-9:15
Marie Pierre Krafft
Oligo(ethylene glycol) bisphosphonate dendrons in fluorocarbon-stabilized biomedical microbubbles

9:15-9:30
Ali Shakeri-Zadeh
MPI/MRI cell tracking of ALS patient-derived, genome-corrected iPSCs and iPSC-derived motor neurons

9:30-9:45
Yicheng Ni
OncoCiDia as a dual targeting chemo-radial theranostic: Potential for brain metastasis

9:45-10:00
Akanksha Bhargava
A novel multimodality contrast workflow for "image-based" vascular systems biology

10:00-10:30: Round Table Discussion

10:30-10:45: Coffee Break

10:45-12:30: Optical and Targeted MRI Agents
Chairs: TBD

10:45-11:00
Edward Delikatny
Fluorescent ChoKα inhibitor for intraoperative tumor imaging in a veterinary clinical trial

11:00-11:15
Hisataka Kobayashi
Near infrared photoimmunothrapy of cancer; targeting immune suppressor cells for enhancing immunity

11:15-11:30
Michael Tweedle
4Iphf-d-HN17: a novel hybrid small molecule-cell-penetrating peptide in HNSCC
11:30-11.45 Sarah Garifo
Preparation and characterizations of a Nanoplatform-based MRI/OI Contrast Agent

11:45-12:00 Cynthia Choi
Long-acting, APC Gd-chelates for tumor MR imaging and therapy

12:00-12:30: Round Table Discussion

12:30-13:30: Lunch at the Graduate Hotel

13:30-15:00: MRS Probes for Detecting Metabolites
Chairs: TBD

13:30-13:45 Robert N. Muller
Enzymatic Activity Monitoring through Dynamic Nuclear Polarization in the Earth magnetic field, the PRIMOAGIA Project

13:45-14:00 Francesca Reineri
13C Hyperpolarized metabolites by means of hydrogenative PHIP (ParaHydrogen Induced Polarization)

14:00-14:15 Zoltan Kovacs
Detecting zinc in biological samples with hyperpolarized $^{15}$N MRS

14:15-14:30 Eul Hyun Suh
Detection of D- and L-lactate in erythrocytes and cancer cells by use of a chiral NMR shift reagent

14:30-15:00: Round Table Discussion

15:00-15:15: Coffee Break

15:15-17:00: Ultrasound Agents
Chairs: TBD

15:15-15:30 Agata Exner
Nanobubbles for contrast enhanced ultrasound imaging of prostate cancer in a large animal model
15:30-15:45  
Evan Unger  
*Ultrasound mediated cavitation for the treatment of Alzheimer’s disease*

15:45-16:00  
Robert Mattrey  
*Improving Tumor Cell Clusters Retrieval from Blood through Increased Buoyancy with targeted microbubbles and Nanodroplets*

16:00-16:15  
Caroline de Gracia Lux  
*Acoustic vaporization of internalized perfluorobutane nanodroplets for imaging and immunotherapy*

16:15-16:30  
Alexander Klibanov  
*PSMA-targeted microbubbles: a potential contrast agent for tumor cell imaging in mosaic vasculature*

**16:30-17:00: Round Table Discussion**

**19:00-20:30: Dinner on your own**

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**Wednesday, August 24**

7:30-8:30: Breakfast

8:30-10:15 Nanocarrier Agents I (MRI)  
**Chairs: TBD**

8:30-8:45  
James P. Basilion  
*Prostate-specific membrane antigen targeted gold nanoparticles for PCa radiotherapy and MR Imaging*

8:45-9:00  
Guanshu Liu  
*MRI tracking of magnetically labeled extracellular vesicles following systemic delivery*
9:00-9:15 Delphine Felder-Flesch
SUPERSPIO®: a functional magnetic platform for active tumor targeting

9:15-9:30 Ramesh Marasini
Gadolinium labeled macrophage-derived exosome as a magnetic resonance imaging contrast agent

9:30-9:45 Ethel Ngen
Engineering prostate tumors with targeted photodynamic therapy for enhanced nanoparticle delivery

9:45-10:15: Round Table Discussion

10:15-10:30: Coffee break

10:30-12:30 Advances in MRI Agents II
Chairs: TBD

10:30-10:45 Yingying Ning
Small molecule MR probes for imaging organ fibrogenesis

10:45-11:00 Jenny Yang
Early detection and staging fibrosis and inflammation by pMRI using targeted protein contrast agents

11:00-11:15 Janet Morrow
Multinuclear Fe(III) complexes as MRI Contrast Agents

11:15-11:30 Gyula Tircso
Detecting Zn(II) secretion using Mn(II)-based magnetic resonance imaging contrast agent candidate

11:30-11:45 Zsolt Baranyai
Acid, base and autocatalyzed proton exchange as an additional route to enhance the relaxivity of paramagnetic MRI contrast agents
11:45-12:00 Mark Pagel
PET/MRI contrast agents for measuring extracellular pH in the tumor microenvironment

12:00-12:30: Round Table Discussion

12:30-13:30: Lunch

13:30-14:15: Business Meeting

14:15-16:00: Nanocarrier Agents II (MRI and MPI)
Chairs: TBD

14:15-14:30 Indiana Ternad
PEGylated magnetic nanoparticles as a theranostic agent

14:30-14:45 Tom Scheenen
Nodal staging of solid tumors: USPIO-enhanced MRI 2.0

14:45-15:00 Qin (Daisy) Sun
Building a magnetosome-like nanoparticle for MRI using essential bacterial genes

15:00-15:15 Gordana Vitaliano
Novel clathrin-based superparamagnetic iron oxide nanoprobes for MRI of dopamine transporters in drug addiction

15:15-15:30 Benjamin Fellows
Encapsulation techniques to create biocompatible super-resolution tracers for magnetic particle imaging

15:30-15:45 Chao Wang
MPI/CT imaging of stem cell-mediated tumor delivery of a bimodal superparamagnetic and radiopaque nanocomplex

15:45-16:00 Jessica Hsu
Multimodality detection and treatment for breast cancer with a biodegradable “one-for-all” nanoparticle contrast agent
16:00-16:30: Round Table Discussion

16:30-16:45: Coffee Break

16:45-17:15: Harry Fischer Medal Award Lecture
Moderator: Carlo Quattrocchi

Dean Sherry: “The Joy of Scientific Discovery: Playing with the f-Elements”

18:00-21:00: Gala Dinner at McGarvey’s
8 Market Space, Annapolis, MD 21401
(410) 263-5700

THURSDAY, AUGUST 25

7:30-8:30: Breakfast

8:30-10:45: Advances in MRI Agents III
Chairs: TBD

8:30-8:45  Alexei Bogdanov
Iron-chelate based redox probe for MR imaging of aneurysmal inflammation

9:00-9:15  Sophia Laurent
Alternative to Gd MRI contrast agents: Development of Mn complexes based on Pyclen

9:30-9:45  Zheng-Rong Lu
Preclinical assessment of MT218 for accurate diagnosis of invasive prostate cancer with MRMI
9:45-10:00  Yajuan Li
Preclinical Evaluations of a Targeted MRI Contrast Agent MT218 for Clinical Development

10:00-10:15  Jingjuan Qiao
Precise and noninvasive detection of liver metastases and progression by Protein MRI Contrast Agents

10:15-10:45: Round Table Discussion

10:45-11:00 Elliott Lasser Award for Best Abstract
Presenter: Carlo Quattrocchi

11:00-11:30 Closing and Remarks
Paul Evans: Presentation CMR 2024 Venue