









# The 6<sup>th</sup> Asian Cardiovascular Symposium A pre-meeting symposium of BCVS-2024

Sunday, July 21, 2024, Chicago
Hilton Chicago | Chicago, Illinois
720 South Michigan Avenue | Chicago, IL | 60605





Asian Cardiovascular Symposium

#### Jointly organized by:

Academy of Cardiovascular Research Excellence (ACRE) Japanese Cardiovascular Research Association (JCRA) Korean Cardiovascular Society (KCS) Society for South Asian Heart Research (SAHR)

#### Program at a glance:

Noon to 1PM - Registration

1-5PM - Society Program

5-7PM - Poster Session

7-10PM – Keynote, Awards, and Dinner

Keynote Speaker: Hossein Ardehali, MD, PhD (Northwestern University)

#### Registration:

(online) https://my-acre.org/acs-2024/

ACS Registration (\$100)

Dinner (\$110) including keynote, award presentation, and social \*Apologies, we have reached full capacity.

Onsite registration \$120 in front of the Waldorf Rm (3rd floor)

For questions, please contact Satoru Kobayashi (skobayas@nyit.edu)

## **Register Now!**



Scan to register and get the program











# Overview of 6<sup>th</sup> ACS Program

		or o'				
12:00 PM – 1:00 PM	Registration					
4 00 014 5 00 014		In front of Waldorf Room (3rd floor)				
1:00 PM – 5:00 PM		Society Program				
		ACRE	JCRA	KCS	SAHR	
		Waldorf	Williford A	Williford C	Marquette	
		(3 <sup>rd</sup> floor)  Opening	(3 <sup>rd</sup> floor)  Opening	(3 <sup>rd</sup> floor)  Opening	(3 <sup>rd</sup> floor)  Opening	
	1:00 PM	Session I	Session I	Session I	Session I	
		Featured Presentation	363310111	Plenary Lecture	Early Career Faculty	
					Presentations	
				Session II		
				Invited Lecture from SAHR		
	2:00 PM					
					Session II	
			Exchange Program featured speaker from ACRE		Plenary Exchange Speaker Seminar	
		Break	Break			
	3:00 PM	Session II	Session II	Session III	Session III	
		ACRE-Cardiology Discovery Young Investigator Award Presentation		Invited Lecture	Mid-career /Established Faculty Presentations	
				Session IV	Session IV	
				Oral Presentation	Data Blitz:Pre-doctoral	
	4:00 PM				Trainee PresentationS	
	4:00 PIVI	Session III  ACRE Junior Faculty	Session V			
		Award Presentation			Data Blitz:Post-doctral Trainee Presentations	
		Annual meeting				
	5:00 PM	Closing	Closing	Closing	Closing	
5:00 PM – 6:45 PM			Poster Session			
		Salon A in the Stevens Meeting Center (B1 floor)				
7:00 PM – 10:00 PM		ACS Joint Assembly and Dinner (Waldorf, 3 <sup>rd</sup> floor)				
	7:00 PM	Opening				
	7:05 PM	Dinner  ACS Program Introduction				
	8:00 PM					
	8:15 PM	BCVS Leadership R				
	8:30 PM	Keynote speech- Hossein Ardehali, MD, PhD  Award Announcement Closing				
	9:15 PM					
	9:30 PM					











## **Special Acknowledgements**

BCVS Chair <u>Jianyi "Jay" Zhang</u>, MD, PhD, University of Alabama at Birmingham

BCVS Vice Chair Maria Kontaridis, PhD, Masonic Medical Research Institute

BCVS 2024 Program Committee Chair Sumanth Prabhu, MD, FAHA, Washington University

BCVS 2024 Program Committee Vice-Chair Farah Sheikh, PhD, UC San Diego



## **Acknowledgments**

# ACS acknowledges generous donations from the following sponsors: Individual Donations

Maria Kontaridis, PhD, Masonic Medical Research Institute

Raj Kishore, PhD, Temple University

Sathyamangla V. Naga Prasad, PhD, Cleveland Clinic

Young-sup Yoon, MD, PhD, Emory School of Medicine

Sang-Ho Lee, PhD, Emory School of Medicine

Jiang Chang, MD, PhD, Texas A&M Institute of Biosciences and Technology

Junichi Sadoshima, MD, PhD, Rutgers New Jersey Medical School

Anonymous donors

## **Financial Sponsors**

## **Cardiology Discovery**

https://journals.lww.com/cd/pages/default.aspx

Cardiology Discovery (CD) is the official journal of the Chinese Society of Cardiology (CSC) of Chinese Medical Association (CMA). It is an English



language, peer-reviewed journal that aims to publish high-quality materials on all aspects of cardiovascular medicine and surgery, including original clinical, epidemiological, basic and translational research, health services and outcomes studies, state-of-the-art reviews, technical evaluations, case reports, editorial, perspective, consensus and guideline papers. CD has an international outlook, that is to create a platform of international collaboration and exchange of cutting-edge information on cardiovascular research and education.

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OBiO Technology is a leading plasmids and viral vector packaging service



provider. As a listed company headquarter in Shanghai and branch in Boston, OBiO tech dedicated to supply holistic gene delivery services to scientists and industry. Recently, OBiO developed a new cardiomyocyte targeted 'AAV-Heart system', which shows more efficient than AAV9-cTnT system.

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Since 2002, RWD Life Science has been the world leading manufacturer of laboratory research instruments for life science researches. We specialize in producing Animal Surgery and Modeling Solution; in vivo Imaging Solution, Histopathology Solution, Cellular and Molecular Biology Research Solution for researchers around the world. For more information, please visit our Web: <a href="https://www.rwdstco.com/">https://www.rwdstco.com/</a> or E-mail us: <a href="mailto:rwd@rwdstco.com/">rwd@rwdstco.com/</a>.

#### Heartseed

https://heartseed.jp/en/

1-2-3 Shibaura, Minato-ku, Tokyo 105-0023, JAPAN



Heartseed is a pioneering clinical-stage biotech company that aims to cure severe heart failure with the world's first "remuscularization", or cardiomyocyte replacement therapy. Heartseed has proprietary technologies throughout the entire manufacturing process of the cardiomyocyte-cell product, including differentiation, purification, cell delivery and iPSC production.

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# The Academy of Cardiovascular Research Excellence (ACRE) Oral Session

Room: Waldorf (3<sup>rd</sup> floor), 1:00 PM – 5:00 PM

	1001), 1.00 PM - 3.00 PM
Opening	
13:00-13:10	Opening Remarks
	Xuejun (XJ) Wang, MD, PhD, University of South Dakota
	President of ACRE
	Li Qian, PhD, University of North Carolina at Chapel Hill
	Liya Yin, MD, PhD, Northeast Ohio Medical University
	ACRE Program & Science Committee Co-chair
Session I	Featured Presentation
363310111	Moderators: Yi Hong, PhD, University of Texas at Arlington
	Jie Li, MD, PhD, Augusta University
13:10-13:30	Degiang Li, PhD, Research Institute at Nationwide Children's Hospital, Columbus
15.10-15.50	Title: The Role of Nonmyocytes During Myocardial Development, Do We Know Everything?
13:30-13:50	Xi Fang, PhD, University of California, San Diego
15.50 15.50	Title: Dietary Linoleic Acid Supplementation Ameliorates Cardiomyopathy in Barth Syndrome
13:50-14:10	Jun Wang, PhD, The University of Texas Health Science Center at Houston
13.30 14.10	Title: To Beat or Not to Beat: A Hippo in the Sinoatrial Node
14:10-14:30	Wuqiang Zhu, MD, PhD, Mayo Clinic, Arizona
11.10 11.30	Title: Nanoparticles and Cardiac Drug Delivery
14:30-14:50	Jin O-Uchi, MD, PhD, FAHA, FCVS, University of Minnesota (Exchanged Speaker from JCRA)
	Title: ER-Mitochondria Calcium Transport and Cardiac Fibrosis
	Coffee Break: 10 min
Session II	ACRE-Cardiology Discovery Young Investigator Award Presentation
	Moderators: Yaoliang Tang, MD, PhD, Augusta University
	Dan Tong, MD, PhD, University of Texas Southwestern Medical Center
15:00-15:15	Ning Liu, Chinese Academy of Medical Sciences & Peking Union Medical College
	PTMA-MBD3 axis is a core heart regenerative driver in mammals
15:15-15:30	Yijie Wang, University of California Los Angeles
	Fibroblasts in Heart Scar Tissue Directly Regulate Cardiac Excitability and Arrhythmogenesis
15:30-15:45	Qiang Zhu, University of North Carolina at Chapel Hill
	Unveiling the Role of GRAF1 in Orchestrating Mitophagy and Metabolic Flexibility in Stressed
	Cardiomyocytes
15:45-16:00	Yu Sun, Lerner Institute, Cleveland Clinical Foundation
	Targeting 8-adrenergic receptor resensitization attenuates cardiac dysfunction
<b>Sponsor Pres</b>	
16:00 -16:05	Introduction of Cardiology Discovery
16:05-16:10	Vendor show RWD Life Science

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	Coffee	Break:	5	min	

Session III	ACRE Junior Faculty Award Presentation			
	Moderators: Hongyu Qiu, MD, PhD, University of Arizona, College of Medicine			
	Hongchao Guo, PhD, University of Utah			
16:15-16:30	Ying Wang, Southern University of Science and Technology, China			
	Gene therapy of MAOA fine-tunes nuclear cAMP nanodomain and improves cardiac			
	hypertrophy in mice			
16:30-16:45	Dennis Wang, University of Washington, Seattle			
	Mitochondria-containing Extracellular Vesicle Mediate Heart Failure Sterile Inflammation			
	·			

### **Annual ACRE Business Meeting**

Presided by: Xuejun (XJ) Wang, MD, PhD, ACRE President

16:45-16:55

Report from Membership Chair: <u>Yajing Wang</u>, MD, PhD, University of Alabama at Birmingham Report from Financial Chair: <u>Qiangrong Liang</u>, MD, PhD, New York Institute of Technology

### **Closing Remark**

16:55-17:00

President-elect: Zhao Wang, PhD, City of Hope National Medical Center

#### **Group Photo Time**

17:00-17:05

## **Poster Session (joint)**

17:05-18:45 Poster viewing - Salon A in the Stevens Meeting Center (B1 floor)





# The Japanese Cardiovascular Research Association (JCRA) Oral Session

Room: Williford A (3<sup>rd</sup> floor), 1:00 PM – 5:00 PM

	ROOM: Willion A (5 HOOF), 1.00 PW - 5.00 PW				
Opening					
1:00 PM-1:05 PM	Opening Remarks Koichiro Kuwahara, MD, PhD, Shinshu University School of Medicine				
Session I					
	Moderators: Masataka Nishiga, MD, PhD, Stanford University School of Medicine  Tomoya Kitani, MD, PhD, Kyoto Prefectural University of Medicine				
1:05 PM-	Shinichi Oka, PhD, Rutgers New Jersey Medical School Title: Sirt1 inhibits the Sub1-induced RNA polymerase II recruitment to metabolic gene promoters during pressure overload				
1:20 PM-	Atsuki En, PhD, Cincinnati Children's Hospital Title: Repairing nuclear envelope ruptures to ameliorate Lamin-related cardiomyopathy				
1:35 PM-	Asuka Eguchi, PhD, University of California, Irvine Title: Cardiomyocytes Differentiated from Human Induced Pluripotent Stem Cells Show Robust Phenotypes to Test Gene Therapy Strategies for Duchenne Muscular Dystrophy				
1:50 PM-	Networking (35min)				
2:25 PM-	<u>Huabo Su</u> , PhD, Augusta University (Exchange Program featured speaker from ACRE)  Title: <b>A New Mitochondrial Quality Control Mechanism in the Heart</b>				
2:45 PM	Coffee Break (10min)				
Session II					
	Moderators: Satoru Kobayashi, PhD, NYIT College of Osteopathic Medicine <u>Daisuke Shimura</u> , PhD, University of Utah				
2:55 PM-	<u>Kiyoshi Masuyama</u> , MD, PhD, UCLA Cardiac Arrhythmia Center Title: <b>Cardiac-Selective TRPV1 Afferent Ablation in Subacute Myocardial Infarction</b> <b>Ameliorates Adverse Remodeling and Ventricular Arrhythmogenesis</b>				
3:10 PM-	Masaya Kogure, MD, Kyoto Prefectural University of Med Title: Inhibition of TAOK1-mediated Cardiomyocyte Death Attenuates Doxorubicin-Induced Cardiotoxicity				
3:25 PM-	Sho Tanosaki, MD, PhD, Cardiovascular Institute, University of Pennsylvania				

Title: Metabolomic Profile of Human End-Stage Ischemic Cardiomyopathy Reveals Few Differences from Non-Ischemic Cardiomyopathy

3:40 PM- Risa Mukai, PhD, New Jersey Medical School

Title: Mst1 induces cardiac dysfunction through the activation of PERK

3:55 PM- Yuta Yamamoto, DVM, PhD, Stanford University

Title: Variant Effect Mapping by Combining Base-editing Mutagenesis and Multiplexed

**Functional Assays Using Human Cardiomyocytes** 

4:10 PM- Shuji Chino, MD, Shinshu University

Title: Optimizing Immunosuppressive Strategies for Enhanced Survival of Allogeneic Pluripotent Stem Cell-Derived Cardiomyocytes in Non-Human Primate Transplantation

Model

4:25 PM- **Networking (15min)** 

**Sponsor Presentation** 

4:40 PM- Nissan Chemical

**Closing Remarks/ Group Photo** 

4:45 PM-5:00 PM Closing Remarks

Masataka Nishiga, MD, PhD, Stanford University School of Medicine

**Poster Session (joint)** 

5:00 PM-6:45 PM Poster viewing - Salon A in the Stevens Meeting Center (B1 floor)





# **Korean Cardiovascular Society (KCS) Oral Session**

Room: Williford C (3<sup>rd</sup> floor), 1:00 PM – 5:00 PM

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Opening			
1:00 PM-1:05 PM	Opening Remarks Soon Jun Hong, MD, PhD, Korea University, Korea		
Session I	Plenary Lecture		
	Moderators: Soon Jun Hong, MD, PhD, Korea University, Korea  Jihyun Jang, PhD, Nationwide Children's Hospital, USA		
1:05 PM-1:35 PM	Youngkeun Ahn, MD, PhD, Chonnam National University, Korea Title: Therapeutic Targeting of Cardiovascular Inflammation		
Session II	Invited Lecture, Exchange talk with SAHR		
	Moderators: Youngkeun Ahn, MD, PhD, Chonnam National University, Korea Kyung-Han Kim, PhD, University of Ottawa Heart Institute, Canada		
1:40 PM-2:00 PM	Hun-Jun Park, MD, PhD, The Catholic University, Uijeongbu St. Mary's Hospital, Korea Title: <b>Heart regeneration-Making breakthrough and Renewed optimism</b>		
2:00 PM-2:20 PM	Jihyun Jang, PhD, Nationwide Children's Hospital, USA Title: Nonmyocardial Epigenetic Pathway Contributing to Heart Development		
2:25 PM-2:45 PM	<u>Sakthivel Sadayappan, PhD, MBA, FAHA</u> , University of Cincinnati College of Medicine, USA Title: <b>The Unsung Hero of the Striated Muscles: A Tale of Myosin Binding Protein-C</b>		
2:45 PM-2:55 PM	Coffee Break (10min)		
Session III	Invited Lecture		
	Moderators: Yong Sook Kim, PhD, Chonnam National University Hospital, Korea Hee Chul Cho, PhD, Johns Hopkins School of Medicine, USA		
2:55 PM-3:10 PM	Somy Yoon, PhD, Chonnam National University, Korea Title: Targeted Downregulation of MKI67 Mediated by miR-10b-5p Contributes to the Pathogenesis of Kawasaki Vasculitis		
3:10 PM-3:25 PM	Sung Jin Park, PhD, Emory University, USA Title: Biohybrid systems and its applications		
3:25 PM-3:30 PM	Q & A		

Moderators: Hun-Jun Park, MD, PhD, The Catholic University, Korea Young Min Bae, PhD, Konkuk University, USA Junbeom Park, MD, PhD, Emory University, USA Junbeom Park, MD, PhD, Ewha Womans University of Korea YouMi Hwang, MD, PhD, The Catholic University of Korea Sung Woo Cho, MD. PhD, Inje University  Bo Kyoung Park, BS, Ewha Womans University, Korea Title: Identifying Preventive and Therapeutic Effects of SGLT2 Inhibitor on Atrial Fibrillation Solah Park, PhD, Konkuk University, Korea Title: Na* leak channel NALCN plays an essential role in mineralocorticoid-induced hypertension through nonrenal mechanisms Rimshah Abid, PhD, University of Ottawa Heart Institute, Canada Title: Antagonistic and Cooperative Dynamics of Irx3 and Irx4 in Ventricular Compaction  1:00 PM-4:10 PM Younghwan Choi, PhD, Johns Hopkins School of Medicine, USA Title: Gelatin hydrogel elasticity influences TBX18-induced pacemaker cell behavior  1:10 PM-4:20 PM Eun-Ah Sung, MS, Rutgers NJMS, USA Title: Doxorubicin induces cardiomyopathy through Wnt5a-mediated induction of senescence Young Geun Choi, MS, University of Minnesota, USA Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage Viola Morris, PhD, Emory University School of Medicine, USA Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration	Session IV	Oral Presentation
Sung Jin Park, PhD, Emory University, USA Junbeom Park, MD, PhD, Ewha Womans University, Korea YouMi Hwang, MD, PhD, The Catholic University of Korea Sung Woo Cho, MD. PhD, Inje University  8:30 PM-3:40 PM  Bo Kyoung Park, BS, Ewha Womans University, Korea Title: Identifying Preventive and Therapeutic Effects of SGLT2 Inhibitor on Atrial Fibrillation  Solah Park, PhD, Konkuk University, Korea Title: Na* leak channel NALCN plays an essential role in mineralocorticoid-induced hypertension through nonrenal mechanisms Rimshah Abid, PhD, University of Ottawa Heart Institute, Canada Title: Antagonistic and Cooperative Dynamics of Irx3 and Irx4 in Ventricular Compaction  1:00 PM-4:10 PM Younghwan Choi, PhD, Johns Hopkins School of Medicine, USA Title: Gelatin hydrogel elasticity influences TBX18-induced pacemaker cell behavior  1:10 PM-4:20 PM Eun-Ah Sung, MS, Rutgers NJMS, USA Title: Doxorubicin induces cardiomyopathy through Wnt5a-mediated induction of senescence Young Geun Choi, MS, University of Minnesota, USA Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage Yiola Morris, PhD, Emory University School of Medicine, USA Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration		Moderators: Hun-Jun Park, MD, PhD, The Catholic University, Korea
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Rimshah Abid, PhD, University of Ottawa Heart Institute, Canada Title: Antagonistic and Cooperative Dynamics of Irx3 and Irx4 in Ventricular Compaction  Younghwan Choi, PhD, Johns Hopkins School of Medicine, USA Title: Gelatin hydrogel elasticity influences TBX18-induced pacemaker cell behavior  Eun-Ah Sung, MS, Rutgers NJMS, USA Title: Doxorubicin induces cardiomyopathy through Wnt5a-mediated induction of senescence Young Geun Choi, MS, University of Minnesota, USA Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage Viola Morris, PhD, Emory University School of Medicine, USA Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration  Q & A  Closing		Title: Na <sup>+</sup> leak channel NALCN plays an essential role in mineralocorticoid-induced
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Title: Gelatin hydrogel elasticity influences TBX18-induced pacemaker cell behavior  Eun-Ah Sung, MS, Rutgers NJMS, USA  Title: Doxorubicin induces cardiomyopathy through Wnt5a-mediated induction of senescence  Young Geun Choi, MS, University of Minnesota, USA  Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage  Yola Morris, PhD, Emory University School of Medicine, USA  Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration  A:40 PM-4:50 PM Q & A		Title: Antagonistic and Cooperative Dynamics of Irx3 and Irx4 in Ventricular Compaction
Eun-Ah Sung, MS, Rutgers NJMS, USA Title: Doxorubicin induces cardiomyopathy through Wnt5a-mediated induction of senescence 4:20 PM-4:30 PM Young Geun Choi, MS, University of Minnesota, USA Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage 4:30 PM-4:40PM Viola Morris, PhD, Emory University School of Medicine, USA Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration 4:40 PM-4:50 PM Q & A	4:00 PM-4:10 PM	· · · · · · · · · · · · · · · · · · ·
Title: Doxorubicin induces cardiomyopathy through Wnt5a-mediated induction of senescence  Young Geun Choi, MS, University of Minnesota, USA Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage  Yiola Morris, PhD, Emory University School of Medicine, USA Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration  Year Opm-4:50 PM  Q & A  Closing		Title: Gelatin hydrogel elasticity influences TBX18-induced pacemaker cell behavior
induction of senescence  Young Geun Choi, MS, University of Minnesota, USA  Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage  Young Morris, PhD, Emory University School of Medicine, USA  Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration  4:40 PM-4:50 PM  Q & A	4:10 PM-4:20 PM	
Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes Reprogramming of the Endothelial Lineage 4:30 PM-4:40PM Viola Morris, PhD, Emory University School of Medicine, USA Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration 4:40 PM-4:50 PM Q & A Closing		, , , , <del>,</del>
Reprogramming of the Endothelial Lineage  1:30 PM-4:40PM  Viola Morris, PhD, Emory University School of Medicine, USA  Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration  1:40 PM-4:50 PM  Q & A  Closing	4:20 PM-4:30 PM	Young Geun Choi, MS, University of Minnesota, USA
Yiola Morris, PhD, Emory University School of Medicine, USA Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration  4:40 PM-4:50 PM Q & A  Closing		Title: ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes
Title: Sheet like extracellular matrix secreting single cell microvesicles for reprogrammed endothelial cell therapy towards vascular regeneration  4:40 PM-4:50 PM Q & A  Closing		Reprogramming of the Endothelial Lineage
reprogrammed endothelial cell therapy towards vascular regeneration 4:40 PM-4:50 PM Q & A Closing	4:30 PM-4:40PM	<u>Viola Morris, PhD</u> , Emory University School of Medicine, USA
1:40 PM-4:50 PM Q & A  Closing		
Closing		reprogrammed endothenal cen therapy towards vascular regeneration
	4:40 PM-4:50 PM	Q & A
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Young-sup Yoon, MD, PhD, Emory University School of Medicine	4.30 PIVI-4:33 PIVI	_
Youngkeun Ahn, MD, PhD, Chonnam National University, Korea		Tourigheuri Ailli, Mid, Pild, Choilliani National University, Korea
Group Photo	<b>Group Photo</b>	

4:55 PM-5:00 PM

## **Poster Session (joint)**

5:00 PM-6:45 PM Poster viewing- Salon A in the Stevens Meeting Center (B1 floor)





## Society for South Asian Heart Research (SAHR) Oral Session

Room: Marquette (3<sup>rd</sup> floor), 1:00 PM - 5:00 PM

**Opening** 

1:00 to 1:05 PM Welcome/ Opening Remarks Overview/SAHR Organization
President's Note : Sathyamangala Prasad, PhD, Cleveland Clinic, Ohio

1:05 to 1:10 PM Reports

1:40 to 1:45 PM

Treasurer : Mahmood Khan, PhD, The Ohio State University, Ohio

Membership Chair : Venkatesh Sundararajan, PhD, West Virginia University, West Virginia

Mentorship Chair : Hind Lal, PhD, University of Alabama at Birmingham, Alabama

Session I	Data Blitz: Pre-doctoral Trainee Presentations (Selected Talks from BCVS Best Abstracts; 5 slides; 4 minutes (+1 min Q&A).
1:10 PM-	Moderators: <u>Varsha Tandra,</u> PhD, Augusta University <u>Dhanendra Tomar,</u> PhD, Wake Forest University
1:10-1:12 PM	Introduction to the Moderators and the Session
1:12 to 1:17 PM:	Saradha Miriyala, Boston Children's Hospital and Harvard Medical School Title: Spatial Transcriptomics Identifies a Regeneration-Permissive Microenvironment in the Neonatal Mammalian Heart
1:17 to 1:22 PM	Samta Veera; The State University of New Jersey Title: PGC-1 $\alpha$ -dependent transcriptional regulatory mechanisms for tricarboxylic acid cycle genes in the heart.
1:22 to 1:27 PM	Sankalpa Chakraborty; Arkansas State University Title: Aging Heart Failure with Preserved Ejection Fraction is Mediated by Noncoding RNAs
1:27 to 1:32 PM	Zinnia Tran; West Virginia University Title: Cardiac Mitochondrial Dysfunction Induces Region-Specific Mitochondrial Stress Response In The Brain To Adapt Neuronal Changes
1:32 to 1:37 PM	Bibhas Amatya; George Washington University School of Medicine Title: Renal NPFFR2-mediated increase in blood pressure is associated with downregulation of cAMP signaling and upregulation of Na+/K+-ATPase protein expression in the renal proximal tubule
Session II	Data Blitz: Post-doctoral Trainee/Mentored Faculty Presentations (Selected Talks from BCVS Best Abstracts; 5 slides; 4 minutes (+1 min Q&A).
1:38	Moderators: Saravanakumar Murugesan, PhD, University of Alabama at Birmingham Ajit Magadum, PhD, Lewis Katz School of Medicine at Temple University
1:38-1:40 PM	Introduction to the Moderators and the Session
1.40 to 1.45 DN4	Anily Novembra DED University of Heaveton

Anika Nusrat, PhD, University of Houston

	Title: Numb Family Proteins in Epicardium Regulate Epicardial Cells Differentiation and Ventricular Patterning During Development
1:45 to 1:50 PM	Karthi Sreedevi, PhD, Virginia Tech Title: Adeno-associated virus-mediated gene delivery of PERM1 enhances cardiac contractility and mitochondrial biogenesis in mice.
1:50 to 1:55 PM	<u>Austin Angelotti</u> , PhD, Pennsylvania State University Title: Mechanisms of T-lymphocyte Dysfunction in Dilated Cardiomyopathy Patients
1:55 to 2:00 PM	<u>Vivek Pandey</u> , PhD, University of Kentucky Title: <b>O-GlcNAcylation underlies the activation of sodium-glucose cotransporter 1 in diabetic hearts</b>
2:00 to 2:05 PM	Roshan Dutta, PhD, University of Alabama at Birmingham Title: δ-catenin mRNA m6A Methylation Promotes Cardiac Fibrosis following Acute Myocardial Infarction
2:05 to 2:10 PM	Manisha Deogharia, PhD, University of Texas Health Science Center Title: Genetic Deletion of Histone Lysine Demethylase KDM5A in Cardiomyocytes Attenuates LMNA-associated Dilated Cardiomyopathy
2:10 to 2:15 PM	Anand Prakash Singh, PhD; University of Michigan Title: Activin Signaling Inhibition Enhances Cardiac Functional Recovery After Aortic Debanding
Socion III	Dlanamy Eychanga Snaakor Saminar

Session III	Plenary Exchange Speaker Seminar
2:20 PM-	Moderator: <u>Danish Sayed,</u> MD, PhD, Rutgers New Jersey Medical School <u>Divya Sridharan,</u> PhD, The Ohio State University
2:20-2:25 PM	Introduction to the Moderators and the Session
2:25-2:45 PM	Hee Cheol Cho, PhD, Johns Hopkins School of Medicine Title: mRNA gene therapy for cardiac pacing
2:45 PM-2:55 PM	Coffee Break (10min)
Session IV	Invited Faculty Presentations (15-minute Presentation + 5-minute Q/A)
2:55 PM-	Introduction to the Session, Moderators and Speakers  Moderators: Vishwa Rajagopalan, PhD, New York Institute of Technology  Pooja Jadiya, PhD, Wake Forest University School of Medicine
3:00-3:20 PM	Padmini Shirish, PhD; University of California-Davis
	Title: Cardiac Regenerative Therapy Using Gene-edited Stem Cells
3:20-3:40 PM	Amreen Mughal, PhD; Stadtman Investigator, NINDS-Stroke Branch NHLBI- Vascular Translational Medicine Title: Electro-Calcium Coupling in Brain Capillaries
3:40-4.00 PM	Priyatansh Gurha, PhD, University of Texas Health Science Center Title: Deciphering the function of KDM5 family of histone demethylases in the heart

4:00 PM-4:20 PM Dipayan Chaudhuri, MD, PhD, University of Utah

Title: Complex I assembly produces pro-inflammatory reactive oxygen species during

normal physiology

Session V SAHR Townhall: Directions, Suggestions and Future

4:20- 4:50 PM

President : <u>Sathyamangala Prasad</u>, PhD, Cleveland Clinic, Ohio Programming Chair : <u>Shyam S. Bansal</u>, PhD, Pennsylvania State University

Mentorship Chair : Hind Lal, PhD, University of Alabama at Birmingham, Alabama

Early Career Committee Chair : <u>Dhanendra Tomar</u>, PhD, Wake Forest University School of Medicine

**Closing Remarks/ Photo Session** 

4:50 PM-4:55 PM Early Career Chair: Dhanendra Tomar, PhD, Wake Forest University, North Carolina

Programming Chair: Shyam S Bansal, PhD, Pennsylvania State University, Hershey, PA

4:55-5:00 PM SAHR Members Group Photo session

5:00 PM -7:00 PM Poster viewing - Salon A in the Stevens Meeting Center (B1 floor)











## 2024 ACS Joint Assembly Session and Dinner

Room: Waldorf (3<sup>rd</sup> floor), 7:00 PM - 10:00 PM

7:00-7:05 PM Opening Remarks

Masataka Nishiga, MD, PhD, Stanford University School of Medicine

7:05-8:00 PM **Dinner** 

- 4th "BCVS got Talents" Show

Hosts: Rongxue "Rosie" Wu, MD, PhD and Daisuke Shimura, Ph.D.

Technical support and Co-host: Jianli Zhao, MD

7:10 PM - Jianli Zhao, MD: Saxophone - "Going Home" 7:20 PM - Divya Sridaran, PhD: Dance Performance

7:25 PM - Venkata Naga Srikanth Garikipati, PhD: Solo Performance

7:30 PM - Hanyu Su: Saxophone Saxophone- "The Waves Still Sound the Same"

7:40 PM - Sneha Rajasekaran: Dance Performance 7:50 PM - Rongxue Wu, MD, PhD: Solo - "My Heart Will Go On"

8:00-8:15 PM ACS Program Introduction

ACRE Xuejun (XJ) Wang, MD, PhD, University of South Dakota

JCRA <u>Masataka Nishiga</u>, MD, PhD, Stanford University School of Medicine KCS Young-sup Yoon, MD, PhD, Emory University School of Medicine

SAHR: Sathyamangla Prasad, PhD, FAHA, Cleveland Clinic

8:15-8:30 PM **BCVS Leadership Remarks** 

BCVS Vice Chair Maria Kontaridis, PhD, Masonic Medical Research Institute

BCVS 2024 Program Committee Chair <u>Sumanth Prabhu</u>, MD, FAHA, Washington University BCVS Leadership Committee <u>Yajing Wang</u>, PhD, The Univ. of Alabama at Birmingham BCVS Leadership Committee Xinliang Ma, MD, PhD, Thomas Jefferson University

8:30-9:15 PM Keynote Speech

Moderator: Junichi Sadoshima, Rutgers New Jersey Medical School

"My journey to becoming a physician-scientist"

<u>Hossein Ardehali</u>, MD, PhD Northwestern University

Director, Feinberg Cardiovascular and Renal Research Institute

Center for Molecular Cardiology

Thomas D. Spies Professor of Cardiac Metabolism

9:15-9:30 PM Award Announcement

ACRE Kevin Yang Xiang, Ph.D., University of California, Davis

JCRA Koichiro Kuwahara, MD, PhD, Shinshu University School of Medicine

KCS <u>Soon Jun Hong</u>, MD, PhD, Korea University, Korea SAHR: <u>Mahmood Khan</u>, PhD, The Ohio State University

## 9:30 PM Closing Remarks

Zhao Wang, PhD, ACRE President-Elect, City of Hope National Medical Center, CA











## **2024 ACS Poster Session**

## Room: Salon A in the Stevens Meeting Center (B1 floor), 5:00 PM - 6:45 PM

All poster presenters are requested to set up their posters at the Board numbers specified on the board.

## • Academy of Cardiovascular Research Excellent (ACRE)

Board#	Ctr#	First	Last	Title
A2	4091742	Ying	Wang	Gene therapy of MAOA fine-tunes nuclear cAMP nanodomain and improves cardiac hypertrophy in mice
A3	4090095	Zinan	Zhou	Cigarette smoking causes somatic mutations in cardiac endothelial cells
A5	4098435	Mei	Xin	CHD8 is Essential for Postnatal Heart Function through Preserving Mitochondrial Integrity
A6	4098320	Qiang	Zhu	Unveiling the Role of GRAF1 in Orchestrating Mitophagy and Metabolic Flexibility in Stressed Cardiomyocytes
A7	4092323	Yuxia	Li	Single-nucleus and bulk multiomic analyses reveal the dynamics of individual cardiac cell types after myocardial infarction and the underlying gene regulatory networks
A8	4090536	Lianjie	Miao	$\beta 1$ integrins regulate cellular behavior and cardiomyocyte organization during ventricular wall formation
A9	4087535	Yonggang	Ma	Age-associated Alterations in T cell Output and Functions
A10	4094955	Yifan	Xie	Decoding m6a RNA methylomes identifies Igf2bp1 as a common barrier to direct reprogramming
A12		Patricia Kim Phuong	Ngyyen	Meta-analysis of single cell RNA sequencing of CD8+ T cells in human arteries reveals heterogenous cell states
A13		Patricia Kim Phuong	Ngyyen	Single-cell RNA analysis of the immune system of APOE-/- mice shows shared senescent CD8 T cells among immune organs and atherosclerotic plaque
A14	4090074	Md Salim	Ahammed	RPN6-Serine14 Phosphorylation by PKA Protects Against Systolic Overload- Induced Cardiac Remodeling and Heart Failure
A15	4090567	Saima	Ejaz	Genetic Blockade of PKA-mediated Phosphoregulation of 26S Proteasomes Exacerbates Pathology in Both the Brain and Heart of an Alzheimer's Disease Model
A16	4089330	Kasturi	Markandran	Molecular Basis of Sepsis-Induced Cardiomyopathy Under Anthracycline Treatment: Insights from Mouse Model
A17	4097332	Ellen	Poon	Using a mitochondria-rich hiPSC-CM model to investigate doxorubicin-induced cardiotoxicity
A19	4091548	Xinjie	Wang	Global distribution of cardiac exosomes after myocardial infarction
A20	4071074	Junji	Xing	Treatment of Viral Myocarditis by Targeting the TRIM29-PERK Axis-Mediated ER Stress Immune Response

## • Japanese Cardiovascular Research Association (JCRA)

Board#	Ctr#	First	Last	Title
J1	4084249	Masaya	Kogure	Inhibition of TAOK1-mediated Cardiomyocyte Death Attenuates Doxorubicin-
				Induced Cardiotoxicity
J3	4092256	Sho	Tanosaki	Metabolomic Profile of Human End-Stage Ischemic Cardiomyopathy Reveals
				Few Differences from Non-Ischemic Cardiomyopathy

J4	4095993	Shuji	Chino	Optimizing Immunosuppressive Strategies for Enhanced Survival of Allogeneic Pluripotent Stem Cell-Derived Cardiomyocytes in Non-Human Primate Transplantation Model
J5	4096138	Yuta	Yamamoto	Variant Effect Mapping by Combining Base-editing Mutagenesis and Multiplexed Functional Assays Using Human Cardiomyocytes
J6	4096809	Risa	Mukai	Mst1 induces cardiac dysfunction through the activation of PERK
J7	4097952	Seitaro	Nomura	Single-cell spatial omics analysis to develop precision cardiovascular medicine
18	4098276	Naoko	Shiba	Exon-skipping therapy can restore functional dystrophin attenuating calcium overload for DMD cardiomyopathy with mutations in actin-binding domain 1

## • Korean Cardiovascular Society (KCS)

Board#	Ctr#	First	Last	Title
K1	4090280	Viola	Morris	Sheet like extracellular matrix secreting single cell microvesicles for
				reprogrammed endothelial cell therapy towards vascular regeneration
K2	4091278	Young Geun	Choi	ETV2 Transcriptionally Activates Rig1 Gene Expression and Promotes
				Reprogramming of the Endothelial Lineage
К3	4093516	Hyewon	Park	Identifying Preventive and Therapeutic Effects of SGLT2 Inhibitor on
				Atrial Fibrillation
К4	4094599	Hye Ryeong	Lee	Na <sup>+</sup> leak channel NALCN plays an essential role in mineralocorticoid-
				induced hypertension through nonrenal mechanisms
К5	4097727	Young Hwan	Choi	Gelatin hydrogel elasticity influences TBX18-induced pacemaker cell
				behavior
К6	4097850	Eun-Ah	Sung	Doxorubicin induces cardiomyopathy through Wnt5a-mediated
				induction of senescence
К7	4097990	Kyoung-Han	Kim	Antagonistic and Cooperative Dynamics of Irx3 and Irx4 in Ventricular
				Compaction
К8	4099111	Gwang Hyeon	Eom	Targeted Downregulation of MKI67 Mediated by miR-10b-5p
				Contributes to the Pathogenesis of Kawasaki Vasculitis

## • Society for South Asian Heart Research (SAHR)

Board# <b>S01</b>	Ctr# 4095157	First Thirupura S	Last Shankar	Title  DNA METHYLATION AND TRANSCRIPTIONAL MARKERS OF MYOCARDIAL REVERSE REMODELING IN HF PATIENTS ON LVAD SUPPORT
S02	4094298	Sri Karthika	Shanmugam	Hacking the ubiquitin code to distinctively modulate ion channel functional expression
S03	4091755	Snekha	Rajasekaran	Analyzing the Predicted Impact of Published SCN5A Variants in Juvenile-Onset Sick Sinus Syndrome
S04	4097818	Sankalpa	Chakraborty	Aging Heart Failure with Preserved Ejection Fraction is Mediated by Noncoding RNAs
S05	4087463	Roshni	Shetty	Translating ECG responses to drugs across sexes: model development and validation in the clinic
S06	4097461	Charan	Gurrala	Epigenetic Mechanisms Regulate Sex Differences in Cardiac Reparative Functions of Bone Marrow Progenitor Cells
S07	4090140	Shivani	Arora	Targeted chelation therapy decreases Cryopyrin/NLRP3 expression and acts as senomorphic in Chronic Kidney Disorder induced Vascular Calcification.
S08	4098370	Seshagiri Rao	Nandula	Endothelial cell regeneration by secretome obtained from P53 silenced bone marrow derived mesenchymal stromal cells (BM-MSCs)
S09	4098375	Zinnia	Tran	Cardiac Mitochondrial Dysfunction Induces Region-Specific Mitochondrial Stress Response In The Brain To Adapt Neuronal Changes

S10	4090074	Md Salim	Ahammed	RPN6-Serine14 Phosphorylation by PKA Protects Against Systolic Overload- Induced Cardiac Remodeling and Heart Failure
<b>S11</b>	4090092	Anand	Singh	Activin Signaling Inhibition Enhances Cardiac Functional Recovery After Aortic Debanding
<b>S12</b>	4092416	Richa	Aishwarya	Loss of Sigmar1 Aggravated Cardiac Proteotoxicity and Cardiac Dysfunction in Mutant αB-Crystallin Mouse
<b>S13</b>	4096784	Vivek	Pandey	O-GlcNAcylation underlies the activation of sodium-glucose cotransporter 1 in diabetic hearts
<b>S14</b>	4096955	Aaryan	Kohli	A Potential Link Between Stress Kinase JNK2 and AKAP-1 in Catecholamine- Induced Acute Heart Failure
S15	4097608	Anushruti	Ashok	Mechanistic basis of protein phosphatase 2A inhibition by I2PP2A dimerization: A key step in βAR resensitization
<b>S16</b>	4098312	PRERNA	GIRI	Role of Z-disc as a Driver of Hypertrophy and Sarcomere Assembly in Hypertrophic Cardiomyopathy
S17	4098313	KARTHI	SREEDEVI	Adeno-associated virus-mediated gene delivery of PERM1 enhances cardiac contractility and mitochondrial biogenesis in mice.
S18	4091541	Prathapan	Ayyappan	Effect Of Grandmaternal Diabetes and High Fat Diet on Cardiometabolic  Dysfunction in the Second Generation (F2) Newborns
<b>S19</b>	4093129	Satvik	Mareedu	Neurofibromin 2 regulates metabolic gene expression and cardiac responses to pressure overload stress
S20	4094321	Sakthijothi	Muthu	The Mitochondrial LonP1 Is Indispensable For Cardiac Maturation And Function
S21	4097707	Neeraj Kumar	Rai	Investigating Mechanisms Of MCUB Inhibition Of Mitochondrial Calcium Uptake
S22	4092854	Syed Anees	Ahmed	Estrogen modulation of ethanol-evoked cardiac oxidative stress and dysfunction: Role of circadian clock period-2 and ferroptosis in estrogen deficient rats
S23	4093126	Narasimman	Gurusamy	Cardiac Adaptations and Mitochondrial Protection Through Long Noncoding RNAs Regulation in Mice on a Ketogenic Diet
S24	4082556	Rosy	Joshi- Mukherjee	Doxorubicin-Induced hiPSC Hormetic Model
<b>S25</b>	4088879	Lynn	Yap	Hallmark Maturation of the Human Pluripotent Stem Cells-derived Cardiovascular Progenitors in Myocardial Infarcted Large Animal Model
<b>S26</b>	4097455	Kiran	Ali	Recapitulating Cardiac Microenvironment: Elucidating the Role of ECM Components and Architecture on Cardiac Differentiation
S27	4098337	Divya	Sridharan	Cell-Specific Metabolic Labelling Identifies hiPSC-CM Proteome In Vitro and In Vivo Post-Transplantation
<b>S28</b>	4098277	Austin	Angelotti	Mechanisms of T-lymphocyte Dysfunction in Dilated Cardiomyopathy Patients
S29	4097868	Anika	Nusrat	Numb Family Proteins in Epicardium Regulate Epicardial Cells Differentiation and Ventricular Patterning During Development
S30	4095073	Thirupura S	Shankar	Adipocyte Enhancer Binding Protein 1 (AEBP1) Inhibition as a Potential Anti- Fibrotic Therapy in Heart Failure
<b>S31</b>	4095299	Suchita	Pande	AAV9-Mediated Overexpression of Mixed Lineage Kinase 3 After Transaortic Constriction Improves Left Ventricular Function
S32	4093745	Chowdhury S.	Abdullah	Cardiomyocyte Specific Sustained Atg7 Overexpression Activates Mitochondrial Autophagy in the Heart
S33	4091133	Ravinder	Gaddam	Endothelium-Targeted MiR-122 Inhibition Improves Vascular Endothelial Function In a High-Fat Diet Fed mice
S34	4091193	Samta	Veera	PGC- $1\alpha$ -dependent transcriptional regulatory mechanisms for tricarboxylic acid cycle genes in the heart.
S35	4096811	Roshan	Dutta	δ-catenin mRNA m6A Methylation Promotes Cardiac Fibrosis following Acute Myocardial Infarction

S36	4097294	Qiongxin	Wang	Cardiac macrophages expressing CD206 and IL-4Ra are required for adverse LV remodeling in HF
<b>S37</b>	4089330	Kasturi	Markandran	Molecular Basis of Sepsis-Induced Cardiomyopathy Under Anthracycline
				Treatment: Insights from Mouse Model

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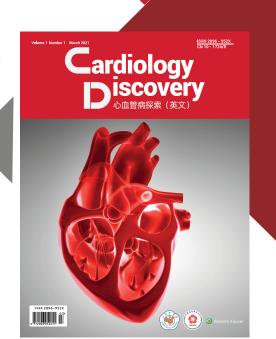


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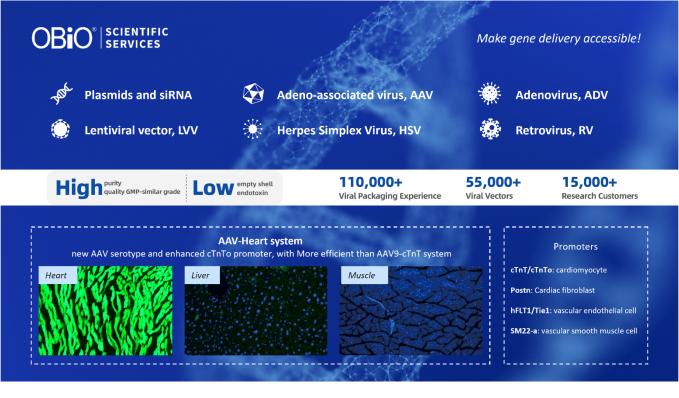
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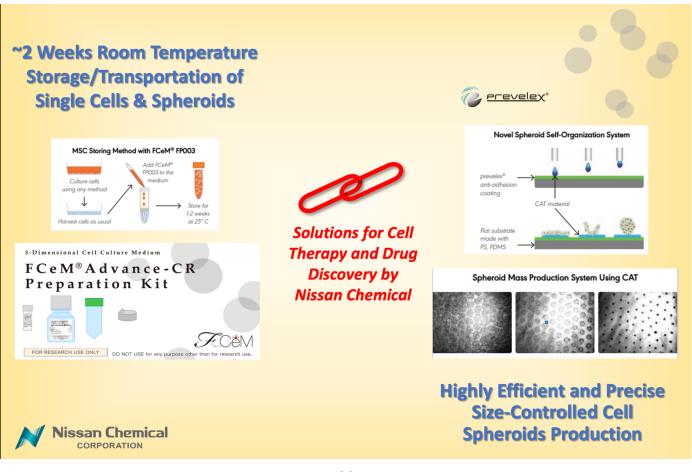
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