Cardiovascular Reprogramming and Regeneration 2025

YONSEI UNIVERSITY

EMORY UNIVERSITY

July 21, 2025
8:30 am – 5:30 pm

Baltimore Marriott Waterfront
Room: Waterview, 1st Floor

CONFERENCE AGENDA

WELCOME REMARKS — **Young-sup Yoon, MD. PhD** (Emory/Georgia Tech/Yonsei University)

1 CARDIOMYOCYTE REPROGRAMMING & REGENERATION

Chair: Youngkeun Ahn, MD, PhD (Chonnam National University, Korea)
Sung-Jin Park, PhD (Emory University/Georgia Tech)

08:30-10:10
- **Joseph C. Wu, MD, PhD** (Stanford University)
- **Li Qian, PhD** (University of North Carolina)
- **Hee Cheol Cho, PhD** (Johns Hopkins University)
- **Kyoung-Han Kim, PhD** (University of Ottawa)

10:10-10:30 Coffee Break

2 VASCULAR REPROGRAMMING & REGENERATION

Chair: Chair: Sang-Ho Lee, PhD (Emory University)

10:30-12:10
- **Daniel J. Garry, MD, PhD** (University of Minnesota)
- **Changwon Park, PhD** (LSU Health Shreveport)
- **Jinhu Wang, PhD** (Emory University)
- **Young-sup Yoon, MD, PhD** (Emory/Georgia Tech/Yonsei University)

12:10-13:30 Lunch Break

3 CARDIAC BIOLOGY AND ORGANOIDS

Chair: Soah Lee, PhD (Sungkyunkwan University, Korea)
Jong Jin Kim, PhD (KERI)

13:30-15:10
- **Da-Zhi Wang, PhD** (University of South Florida)
- **Michael A. Laflamme, MD, PhD** (University of Toronto, Canada)
- **Hun-Jun Park, MD, PhD** (Catholic University, Korea)
- **Sung-Jin Park, PhD** (Emory University/Georgia Tech)

15:10-15:30 Coffee Break

4 BIOENGINEERING

Chair: Hee Cheol Cho , PhD (Johns Hopkins University)
Yong Sook Kim, PhD (Chonnam National University, Korea)

15:30-17:10
- **Jay Zhang, MD, PhD** (University of Alabama Birmingham)
- **Chul-Hwan Lee, PhD** (Seoul National University, Korea)
- **Jaecheol Lee, PhD** (Sungkyunkwan University, Korea)
- **Hyuk Jin Cha, PhD** (Seoul National University, Korea)

CLOSING REMARKS — **Young-sup Yoon, MD, PhD** (Emory/Georgia Tech/Yonsei University)

PHOTO

https://rb.gy/wr7umu

stemyoon@stemyoon.org

Cardiovascular Reprogramming and Regeneration

Venue: Baltimore Marriott Waterfront, 7.21.2025

Room: Waterview, 1st floor

07:00-08:20	**Breakfast**
Welcome Remarks	Young-sup Yoon, MD. PhD (Emory/Yonsei University)
Session I	**Cardiomyocyte reprogramming & regeneration**
	Chair: Youngkeun Ahn, MD, PhD (Chonnam National University, Korea) Sung-Jin Park, PhD (Emory University/Georgia Tech)
08:30-08:55	Joseph C. Wu, MD, PhD (Stanford University) **Stem Cells & Genomics for Clinical Trial in Dish**
08:55-09:20	Li Qian, PhD (University of North Carolina) **Turning Fibroblasts into Cardiomyocytes: The Journey and the Road Ahead**
09:20-09:45	Hee Cheol Cho, PhD (Johns Hopkins University) **Advancing Cardiac Pacing by Gene Therapy**
09:45-10:10	Kyoung-Han Kim, PhD (University of Ottawa) **Understanding and Establishing Heterogeneity in the Cardiac Conduction System**
10:10-10:30	**Coffee Break**
Session II	**Vascular reprogramming & regeneration**
	Chair: Sang-Ho Lee, PhD (Emory University)
10:30-10:55	Daniel J. Garry, MD, PhD (University of Minnesota) **Mechanisms that Govern ETV2 Mediated Reprogramming and Angiogenesis**
10:55-11:20	Changwon Park, PhD (LSU Health Shreveport) **The Role of Autism Spectrum Disorder Risk Gene, Shank3, in Blood Brain Barrier**
11:20-11:45	Jinhu Wang, PhD (Emory University) **Characterizing Epicardial Subpopulation Function during Adult Zebrafish Heart Regeneration**
11:45-12:10	Young-sup Yoon, MD, PhD (Yonsei/Emory University) **Vascular Regeneration with Stem Cells, Reprogrammed Cells and Engineering Technologies**
12:10-13:30	**Lunch**
Session III	**Cardiac biology and organoids**
	Chair: Soah Lee, PhD (Sungkyunkwan University, Korea) Jong Jin Kim, PhD (KERI)
13:30-13:55	Da-Zhi Wang, PhD (University of South Florida) **Role of the Pcbp1-Aars2 Axis in Ventricular non-Compaction and Congenital Heart Defects**
13:55-14:20	Michael A. Laflamme, MD, PhD (University of Toronto, Canada)

Cardiovascular Reprogramming and Regeneration

Venue: Baltimore Marriott Waterfront, 7.21.2025

Room: Waterview, 1st floor

	Maturation of Pluripotent Stem Cell-Derived Cardiomyocytes in vitro and in vivo
14:20-14:45	Hun-Jun Park, MD, PhD (Catholic University, Korea)
	Therapeutic Potential of 3D Multi-Cellular Cardiac Spheroids Derived from Human Pluripotent Stem Cells for Cardiac Regeneration
14:45-15:10	Sung-Jin Park, PhD (Emory University/Georgia Tech)
	Advanced cardiac tissue engineering
15:10-15:30	**Coffee Break**
Session IV	**Bioengineering**
	Chair: Hee Cheol Cho, PhD (Johns Hopkins University) Yong Sook Kim, PhD (Chonnam National University, Korea)
15:30-15:55	Jay Zhang, MD, PhD (University of Alabama Birmingham)
	Remuscularization of Injured Ventricle in Large Mammals
15:55-16:20	Chul-Hwan Lee, PhD (Seoul National University, Korea)
	EZH1-Mediated Epigenetic Shaping of Chromatin Architecture Governs Cardiomyocyte Maturation
16:20-16:45	Jaecheol Lee, PhD (Sungkyunkwan University, Korea)
	Human iPSC-Based Disease Models: From Mechanistic Insights to Predictive Platforms
16:45-17:10	Hyuk Jin Cha, PhD (Seoul National University, Korea)
	Characterization of Genetically Aberrant Human Pluripotent Stem Cells for Detection and Prevention
Closing remarks	Young-sup Yoon, MD, PhD (Emory/Yonsei University)
Photo	
17:20	**Dinner**