

15°

ASMRRM
Conference



miracle

mitochondrial research advancing clinical evolution

7-8 November 2018 | Park Hyatt, Busan, Korea



Dear colleagues and friends,

On behalf of the organizing committee, it is my great pleasure and honor to invite you to participate in the 9th Conference of the Mitochondria Section of KSMCB · 15th Conference of the Asian Society for Mitochondrial Research and Medicine (ASMRM 2018), which will be held on 7th Nov 2018 and 8th Nov 2018 at the Park Hyatt Busan, Busan, Korea.

The ASMRM is a joint venue between the Asian Society for Mitochondrial Research and Medicine and the Korean Society for Mitochondrial Research and Medicine, and is held annually throughout Asia. It is our goal to expose participants to groundbreaking mitochondrial research from renowned international scientists while providing a platform for young researchers to interact with the larger scientific community.

This year's program will focus on mitochondrial research advancing clinical evolution (MIRACLE) that explores novel approaches to rescue mitochondrial dysfunction linked with numerous diseases, including metabolic syndrome, neurodegenerative diseases, cardiovascular diseases, cancer and aging. The conference will consist of the main talk sessions combined with peer-to-peer network sessions. All speakers are the top experts in the field of mitochondrial research and medicine. Your participation through exchanging ideas and in-depth discussions will be a great contribution to the success of the ASMRM 2018. Particularly, we would like to strongly encourage young researchers to join our conference and enjoy this exciting 'MIRACLE'.

The venue is located in Haeundae Busan, which is known for its beautiful beaches. Busan is the 2nd largest city in Korea and has a lot of tourist attractions. It is our hope that you will be able to participate in the ASMRM 2018. We will try to make it a memorable, scientific, social and cultural experience. Please come, make friends, contribute to our society and enjoy the dynamic and exciting atmosphere of Haeundae.

Yours sincerely,



Minho Shong, M.D., Ph.D.

President

Korean Society for Mitochondrial Research and
Medicine



Jin Han, M.D., Ph.D.

Chair

ASMRM 2018 Organizing Committee

Organizing Committee

KSMRM President Minho Shong, Chungnam National University

Chair Jin Han, Inje University

Members

Chan Bae Park, Ajou University

Eun-Kyeong Jo, Chungnam National University

Gyesoon Yoon, Ajou University

Hail Kim, KAIST

Hyo-Bum Kwak, Inha University

Hyon-Seung Yi, Chungnam National University

Hyoung Kyu Kim, Inje University

Inhee Mook-Jung, Seoul National University

In-Kyu Lee, Kyungpook National University

Jeong Hyun Park, Inje University

Jong Chul Won, Inje University

Jongkyeong Chung, Seoul National University

Joong-Yeol Park, University of Ulsan

Joon Won Kang, Chungnam National University

Joo-Yeon Yoo, POSTECH

Kyong Soo Park, Seoul National University

Kyung Soo Ko, Inje University

Kyu-Sang Park, Yonsei University

Myung-Shik Lee, Yonsei University

Young Hyun Yoo, Dong-A University

Young Mi Kang, Chungnam National University

Youngmi Kim Pak, Kyung Hee University

Young Min Cho, Seoul National University

Young-Mock Lee, Yonsei University

Advisory Committee

Byoung Doo Rhee, Inje University

Chii-Ruey Tzeng, Taipei Medical University Hospital

Chin-San Liu, Changhua Christian Hospital

Hong Kyu Lee, Eulji University

Hsin-Chen Lee, National Yang-Ming University

Hun Taeg Chung, University of Ulsan

Jiankang Liu, Xi'an Jiaotong University

Kazuto Nakada, University of Tsukuba

Ki-Up Lee, University of Ulsan

Makoto Yoneda, Fukui Prefectural University

Masashi Tanaka, Tokyo Metropolitan Institute of Gerontology

Min-Xin Guan, Zhejiang University

Quan Chen, Chinese Academy of Sciences

Soon Ha Kim, LG chem.

Sung Soo Kim, Kyung Hee University

Yasutoshi Koga, Kurume University

Yau-Huei Wei, Changhua Christian Hospital

Yi-Shing Ma, Changhua Christian Hospital

YongKyung Choe, KRIBB

Yong Zhang, Tianjin University of Sport

Young-Myeong Kim, Kangwon National University

Park Hyatt Busan



- 51, Marine City 1-ro, Haeundae-gu, Busan 612-824, Korea
- Tel. +82-51-990-1234
- Fax. +82-51-990-1235
- busan.park.hyatt.com
- Located in Haeundae Marine City close to the BEXCO Convention Centre, Haeundae Beach and the city's newest residential area.
- **Transportation**
 - Gimhae International Airport (PUS) - 25 km (16.7 miles): 45 minutes by car
 - Busan Station - 16 km (10 miles): 30 minutes by car
 - BEXCO Convention Centre: 5 minutes by taxi
 - Haeundae (Beach): walking distance 500m, 15 minutes' walk
 - Gwangalli (Beach area and Gwangalli Bridge): 10 minutes by taxi
 - Centum City (Luxury department store, BEXCO, APEC, World business center)
: 5 minutes by taxi
 - Seomyeon (financial, business and Entertainment): 20 minutes by taxi
 - Nampodong (shopping and Entertainment district): 30 minutes by taxi
 - Deayeondong (kyungsung university, nightlife district and UN Memorial Cemetery)
: 20 minutes by taxi

► Nov 7 (Wed), 2018

10:30-11:30	The council meeting of ASMRM 2018	Event Suite
10:30-11:30	Luncheon Seminar by Oroboros	TBD
11:40-12:20	Luncheon Seminar by JSK Biomed	YoonSeok Kam, Agilent Technologies
12:20-12:30	Refreshment	
12:30-12:40	Opening remark	TBD
	MIRACLE Session I Mitochondrial transfer	Organizers: Hong Kyu Lee, Chin-San Liu Chairs: Hong Kyu Lee, Chin-San Liu Panels: Chae Hun Leem, Seung-Kyu Cha
12:40-12:55	Mitochondrial Transplantation: Applications and Potential	James D. McCully, Harvard University
12:55-13:10	Application of Artificial Mitochondrial Therapy in Parkinson Disease	Chin-San Liu, Changhua Christian Hospital
13:10-13:25	Transfer of isolated mitochondria: uptake mechanism and therapeutic	Youngmi Kim Pak, Kyung Hee University
13:25-13:40	Reactivation of dihydroorotate dehydrogenase by respiration restores tumor growth of mitochondrial DNA-depleted cancer cells	Jiri Neuzil, Griffith University
13:40-13:55	Mitochondrial transfer in the brain in a tumour model lacking mitochondrial DNA and in brain cell co-cultures	Michael V. Berridge, Malaghan Institute
13:55-14:10	Role of astrocytic mitochondria for neuroprotection and neuroplasticity after stroke	Kazuhide Hayakawa, Massachusetts General Hospital
14:10-14:25	Refreshment	
	MIRACLE Session II Immunity	Organizers: Eun-Kyeong Jo Chairs: Dongchon Kang, Myung-Shik Lee Panels: Joo-Yeon Yoo, Hyon-Seung Yi
14:25-14:45	Understanding and controlling organelle communications associated with innate immune responses	Tatsuya Saitoh, Osaka University
14:45-15:05	Mitochondrial Dysfunction is Regulator of Inflammation and Cell Death	Jong-Seok Moon, Soonchunhyang University
15:05-15:25	Immune regulatory functions of DOCK family proteins in health and diseases	Yoshinori Fukui, Kyushu University

15:25-15:45	Sirtuin 3 coordinates mitochondrial and autophagic functions to promote innate host defenses	Eun-Kyeong Jo, Chungnam National University
15:45-16:05	Mitochondrial-mediated antiviral innate immunity in mammals	Takumi Koshiba, Kyushu University
16:05-16:15	[Short Talk] Helper T cell responses under unbalanced lipid metabolism	Heeju Ryu, Seoul National University
16:15-16:30	Refreshment	
16:30-18:10	P2P Session 1-3 (2FL) and Poster Presentation (33FL)	
	[P2P theatre A]	Chairs: Chan Bae Park
	1. Mitochondrial biogenesis	Panels: Jun Namkung, TBD
16:30-16:45	Antioxidants enhance mitochondrial biogenesis as well as mitochondrial transfer in human mesenchymal stem cells	Cheng-Yoong Pang, Buddhist Tzu Chi University & General Hospital
16:45-17:00	The role of COTL1 in mitochondrial fission-mediated hematopoietic stem cell homeostasis	Eunkuk Park, Ajou University
17:00-17:15	Reverse genetic studies on mammalian mitochondrial DNA with pathogenic mutations	Kazuto Nakada, University of Tsukuba
17:15-18:10	Discussion	
	[P2P theatre B]	Chairs: Woong Sun
	2. Mitochondrial dynamics and mitophagy	Panels: Kyu-Sun Lee, Quan Chen
16:30-16:45	OPA1 mutation impaired the BNIP3-mediated mitophagy contributing to mitochondrial genome instability and mitochondrial dysfunction	Shu-Huei Kao, Taipei Medical University
16:45-17:00	PTEN-L as a novel negative regulator of mitophagy	Shen Han-Ming, National University of Singapore
17:00-17:15	The ER-associated DRP1 adaptor, CTRP1, regulates mitochondrial fission via interaction with DRP1	Goo Taeg Oh, Ewha Womans University
17:15-18:10	Discussion	
	[P2P theatre C]	Chairs: Byoung Heon Kang
	3. Mitochondrial structure and function	Panels: Hail Kim, Hyun-Woo Rhee
16:30-16:45	Mitochondrial dysfunction and metabolism shift in renal fibrosis	Yau-Sheng Tsai, National Cheng Kung University

16:45-17:00	Roles of mitochondrial ubiquitin ligase MITOL in mitochondrial dynamics and aging-associated diseases Shigeru Yanagi, Tokyo University of Pharmacy and Life Sciences
17:00-17:10	Mitochondrial Transplantation: Applications and Potential James D. McCully, Harvard University
17:10-17:20	Application of Artificial Mitochondrial Therapy in Parkinson Disease Chin-San Liu, Changhua Christian Hospital
17:20-17:30	Transfer of isolated mitochondria: uptake mechanism and therapeutic Youngmi Kim Pak, Kyung Hee University
17:30-17:40	Reactivation of dihydroorotate dehydrogenase by respiration restores tumor growth of mitochondrial DNA-depleted cancer cells Jiri Neuzil, Griffith University
17:50-18:00	Mitochondrial transfer in the brain in a tumor model lacking mitochondrial DNA and in brain cell co-cultures Michael V. Berridge, Malaghan Institute
18:00-18:10	Role of astrocytic mitochondria for neuroprotection and neuroplasticity after stroke Kazuhide Hayakawa, Massachusetts General Hospital
18:10-18:25	Refreshment
	ASMRM Lecture Chairs: In-Kyu Lee
18:25-19:05	Mitochondrial H ₂ O ₂ production is regulated by partial oxygen pressure. Facts and artefacts under low tissue normoxia versus in vitro hyperoxia Erich Gnaiger, Medical University of Innsbruck
	Organizers: Kyu-Sang Park
	MIRACLE Session III Reactive oxygen species Chairs: Hyeseong Cho, Jiankang Liu Panels: Jae Myung Suh, Sun Hee Woo
19:05-19:25	Mitochondrial roles in the response of human cells to oxidative stress elicited by mitochondrial dysfunction Yau Huei Wei, Changhua Christian Hospital
19:25-19:45	Dynamic regulation of mitochondrial double membranes and genome Naotada Ishihara, Kurume University
19:45-20:05	Dynamic Coordination of Mitochondrial Structure and Function Woong Sun, Korea University
20:05-20:25	Emerging role of cellular organelles to rewire cancer cell metabolism Kyu-Sun Lee, KRIBB

➤ Nov 8 (Thu), 2018

MIRACLE Session IV Aging		Organizers: Gyesoon Yoon Chairs: Jongkyeong Chung, Gyesoon Yoon Panels: Dong-Gyu Jo, Young-Sam Lee
09:00-09:20	Molecular regulation of selective mitophagy and its role in inflammasome activation and hepatocarcinogenesis	Quan Chen, Chinese Academy of Sciences
09:20-09:40	p53 regulates mitochondrial dynamics by inhibiting Drp1 translocation into mitochondria during cellular senescence	Jeanho Yun, Dong-A University
09:40-10:00	Exploring the molecular mechanisms to connect metabolism to aging	In Hye Lee, Ewha Womans University
10:00-10:20	Intergenic Basis of Mitonuclear Communication and Aging	Changhan David Lee, University of Southern California
MIRACLE Session V Clinical update		Organizers: Young-Mock Lee Chairs: Kyong Soo Park, Yasutoshi Koga Panels: Hyon-Seung Yi, Se Hoon Kim
10:20-10:40	Diagnosis of mitochondrial diseases	Marni Falk, University of Pennsylvania
10:40-11:00	Treatment of mitochondrial disorders	Yasutoshi Koga, Kurume University
11:00-11:20	Various phenotypes of mitochondrial diseases	Young-Mock Lee, Yonsei University
11:20-11:40	Useful biomarkers for mitochondrial diseases	Joon Won Kang, Chungnam National University
11:40-12:00	Refreshment	
12:00-13:00	Lunch (1FL, 2FL)	
13:00-14:30	P2P Session 4-6 (2FL) and Poster Presentation (33FL)	
[P2P theatre A] 4. Mitochondrial medicine and therapeutics		Chairs: Young-Mock Lee Panels: Jong Chul Won, Sung Woo Cho
13:00-13:15	Cancer selective nano therapy based on mitochondria ferroptosis	Dar-Bin Shieh, National Cheng Kung University

13:15-13:30	Deficient mitochondrial tRNA modifications lead to deafness Min-Xin Guan, Zhejiang University
13:30-13:45	Hydrogen Biology and Hydrogen Medicine: A New and Potential Area for Physiology or Medicine Jiankang Liu, Xi'an Jiaotong University
13:45-14:00	Mitochondrial tRNA modification and mitochondrial disease Fan-Yan Wei, Kumamoto University
14:00-14:30	Discussion
	[P2P theatre B] Chairs: Yau Huei Wei
	5. Oxidative stress and inflammation Panels: Jaemin Lee, Kyu-Sang Park
13:00-13:15	Elevated Levels of ROS and Antioxidant Gene Expression in Inner Ear Hair Cell-like Cells Differentiated from Human Induced Pluripotent Stem Cells with mtDNA Mutation Yi-Chao Hsu, Mackay Medical College
13:15-13:30	Role of mitochondrial ROS on activation of cellular signals Hideyuki Majima, Kagoshima University
13:30-14:30	Discussion
	[P2P theatre C] Chairs: Raekil Park
	6. Organellar interaction Panels: Hunjoo Ha, TBD
13:00-13:15	The regulation of actin assembly and mitochondria dynamics in yeast cells Chuang-Rung Chang
13:15-13:30	Non-canonical mitophagy induced by Mieap and its role in p53 tumor suppression via iron-dependent cell death Hirofumi Arakawa
13:30-13:45	Pex5 deficiency leads to larval lethality upon starvation Seong-Kyu Choe
13:45-14:00	Molecular communication between mitochondria and peroxisome in mammalian cells Hyun-Woo Rhee
14:00-14:15	Regulation of peroxisome selective autophagy by novel pexophagy regulator Dong-Hyung Cho
14:15-14:30	Peroxisome in disease Eun-Jung Jin
14:30-14:45	Refreshment
	Special Lecture Chairs: Minho Shong
14:45-15:25	Kinetics of mitochondria in NAFLD patients Adil Mardinoglu, Chalmers University of Technology

MIRACLE Session VI Lifestyle

Organizers: Hyo-Bum Kwak

Chairs: Wook Song, TBD

Panels: Jae Boum Youm, Jae Seung Chang

15:25-15:45 AMPK-Ulk1 in exercise-induced mitophagy in skeletal muscle
Zhen Yan, University of Virginia

15:45-16:05 Mitochondrial Remodeling by Muscle Stem Cell Transplantation
: The Role of Exercise and Calorie Restriction
Young Charles Jang, Georgia Institute of Tech.

16:05-16:25 Dual deficiency of Bax and Bak alleviates high fat diet-induced insulin resistance in skeletal muscle
Parco M. Siu, University of Hong Kong

16:25-16:45 Role of exercise in obesity-induced mitochondrial dysfunction and insulin resistance in skeletal muscle
Hyo-Bum Kwak, Inha University

MIRACLE Session VII Environment

Organizers: Youngmi Kim Pak

Chairs: Youngmi Kim Pak, Wan-Wan Lin

Panels: Hyoung Kyu Kim, Dongryeol Ryu

16:45-17:05 The metabolic syndrome, dysmitochondrial syndrome and mitochondrial disruptors
Hong Kyu Lee, Eulji University

17:05-17:25 The Role of Mitochondria in Aryl Hydrocarbon Receptor-mediated
2,3,7,8-Tetrachlorodibenzo-p-Dioxin-induced Toxicity in Mouse Hepatoma Cells
Hye Jin Hwang, University of Pittsburgh

17:25-17:45 A novel role of AMPK under genotoxic stress
Joohun Ha, Kyung Hee University

17:45-17:50 Photo**18:30-20:00 Closing Remark & Gala Dinner**

➤ Speakers

ASMRM Lecture

Erich Gnaiger, Medical University of Innsbruck

Special Lecture

Adil Mardinoglu, Chalmers University of Technology

MIRACLE Session

I. Mitochondrial transfer

James D. McCully, Harvard University
 Chin-San Liu, Changhua Christian Hospital
 Youngmi Kim Pak, Kyung Hee University
 Jiri Neuzil, Griffith University
 Michael V. Berridge, Malaghan Institute
 Kazuhide Hayakawa, Massachusetts General Hospital

II. Immunity

Tatsuya Saitoh, Tokushima University
 Jong-Seok Moon, Soonchunhyang University
 Yoshinori Fukui, Kyushu University
 Eun-Kyeong Jo, Chungnam National University
 Takumi Koshiba, Kyushu University
 [Short Talk] Heeju Ryu, Seoul National University

III. Reactive oxygen species

Yau Huei Wei, Changhua Christian Hospital
 Ishihara Naotada, Kurume University
 Woong Sun, Korea University
 Kyu-Sun Lee, KRIBB

IV. Aging

Quan Chen, Chinese Academy of Sciences
 Jeanho Yun, Dong-A University
 In Hye Lee, Ewha Womans University
 Changhan David Lee, University of Southern California

V. Clinical update

Marni Falk, University of Pennsylvania
 Yasutoshi Koga, Kurume University
 Young-Mock Lee, Yonsei University
 Joon Won Kang, Chungnam National University

VI. Lifestyle

Zhen Yan, University of Virginia
 Young Charles Jang, Georgia Institute of Tech.
 Parco M. Siu, University of Hong Kong
 Hyo-Bum Kwak, Inha University

VII. Environment	Hong Kyu Lee, Eulji University Hye Jin Hwang, University of Pittsburgh Joohun Ha, Kyung Hee University
P2P Session	
1. Mitochondrial biogenesis	Cheng-Yoong Pang, Buddhist Tzu Chi University & General Hospital Eunkuk Park, Ajou University Kazuto Nakada, University of Tsukuba
2. Mitochondrial dynamics and mitophagy	Shu-Huei Kao, Taipei Medical University Shen Han-Ming, National University of Singapore Goo Taeg Oh, Ewha Womans University
3. Mitochondrial structure and function	Yau-Sheng Tsai, National Cheng Kung University Shigeru Yanagi, Tokyo University of Pharmacy and Life Sciences James D. McCully, Harvard University Chin-San Liu, Changhua Christian Hospital Youngmi Kim Pak, Kyung Hee University Jiri Neuzil, Griffith University Michael V. Berridge, Malaghan Institute Kazuhide Hayakawa, Massachusetts General Hospital
4. Mitochondrial medicine and therapeutics	Dar-Bin Shieh, National Cheng Kung University Min-Xin Guan, Zhejiang University Jiankang Liu, Xi'an Jiaotong University Fan-Yan Wei, Kumamoto University
5. Oxidative stress and inflammation	Yi-Chao Hsu, Mackay Medical College Hideyuki Majima, Kagoshima University
6. Organellar interaction	Chuang-Rung Chang, National Tsing Hua University Hirofumi Arakawa, National Cancer Center Research Institute Seong-Kyu Choe, Wonkwang University Hyun-Woo Rhee, Seoul National University Dong-Hyung Cho, Kyungpook National University Eun-Jung Jin, Wonkwang University

▶ Panels

MIRACLE Session

I. Mitochondrial transfer	Chae Hun Leem, Ulsan University Seung-Kyu Cha, Yonsei University
II. Immunity	Joo-Yeon Yoo, Postech Hyon-Seung Yi, Chungnam National University
III. Reactive oxygen species	Jae Myung Suh, KAIST Sun Hee Woo, Chungnam National University
IV. Aging	Dong-Gyu Jo, Sungkyunkwan University Young-Sam Lee, DGIST
V. Clinical update	Hyon-Seung Yi, Chungnam National University Se Hoon Kim, Yonsei University
VI. Lifestyle	Jae Boum Youm, Inje University Jae Seung Chang, Yonsei University
VII. Environment	Hyoung Kyu Kim, Inje University Dongryeol Ryu, Pusan National University

P2P Session

1. Mitochondrial biogenesis	Jun Namkung, Yonsei University TBD
2. Mitochondrial dynamics and mitophagy	Kyu-Sun Lee, KRIBB Quan Chen, Chinese Academy of Sciences
3. Mitochondrial structure and function	Hail Kim, KAIST Hyun-Woo Rhee, Seoul National University
4. Mitochondrial medicine and therapeutics	Jong Chul Won, Inje University Sung Woo Cho, Inje University
5. Oxidative stress and inflammation	Jaemin Lee, DGIST Kyu-Sang Park, Yonsei University
6. Organellar interaction	Hunjoo Ha, Ewha Womans University TBD

Key Dates

Pre-registration period	June 1 – August 31, 2018
Regular Registration period	September 1 – September 30, 2018
Abstract submission	June 1 – September 30, 2018
Accommodation	June 1 – September 30, 2018

Registration Fee

Pre-Registration (Early bird rate)	400,000 KRW / 200,000 KRW (student)
Regular Registration	450,000 KRW / 250,000 KRW (student)

Host City: Busan**Busan Tourism Organization (www.bto.or.kr) > Visitors**

You can get useful information about Busan tourism.

Secretariat

ASMRM 2018 in Busan Secretariat

Cardiovascular and Metabolic Disease Center, Inje University
75, Bokji-ro, Busanjin-gu, Busan 47392, KOREA

Office: +82-51-742-8407

Fax: +82-51-746-8407

E-mail: jjin.planb@gmail.com

Conference Website: 2018.asmrn.org