# International Society for Extracellular Vesicles 2018 Workshop

#### **EV-based Clinical Theranostics**

November 18-20, 2018

Southern Medical University Guangzhou, China

#### **Location:**

Southern Medical University

Chunjiang Hall, Qiushuitang Building
1838 Guangzhou Avenue North, Guangzhou

#### **International Organizing Committee**

Chair: Lei Zheng, Southern Medical University, China
Qian Wang, Southern Medical University, China
Hang Hubert Yin, Tsinghua University, China
Yong Song Gho, Pohang University of Science and Technology, Korea
Kenneth W. Witwer, Johns Hopkins University, USA
Marca Wauben, Utrecht University, Netherlands
Andrew Hill, La Trobe University, Australia
Lorraine O'Driscoll, Trinity College Dublin, Ireland

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#### Day 1: Sunday, November 18

### 14:30-20:00 **Registration**

17:00-21:00 Dinner, Southern Hotel

#### Day 2: Monday, November 19

8:00-8:20 Group photos

Opening Remarks Chairperson: (Lei Zheng)

# **8:20-8:35** Welcome, Outline and the Value of ISEV Seminars and Outputs Qian Wang, Southern Medical University, Guangzhou, China Kenneth W. Witwer, Johns Hopkins University, ISEV Chair of Science and Meetings

# 8:35-8:45 Why this Workshop? Addressing Big Questions in EV biomarkers and applications

Andrew Hill, La Trobe University, Australia

Topic #1: EV isolation methods and standardization Chairpersons: (Hang Hubert Yin, Kenneth W. Witwer)

### 8:45-9:15 MISEV in clinical application

Kenneth W. Witwer, Johns Hopkins University, USA

#### 9:15-9:45 Extracellular vesicle-mimetic technologies for theranostics

Yong Song Gho, Pohang University of Science and Technology, Korea

Abstract 1: 9:45-10:00 Rapid Isolation and Detection of Extracellular Vesicles from Plasma for Lung Cancer Diagnosis Junge Chen, Tsinghua University, China

10:00-10:30 Networking Coffee Break and Sponsor Exhibition

# 10:30-11:00 Separation and Characterization of Extracellular Vesicles from Human Plasma by Asymmetrical Flow Field-Flow Fractionation

Fuquan Yang, Institute of Biophysics, Chinese Academy of Sciences, China

Abstract 2: 11:00-11:15 Gold Nano Island Based Lab on Chips for Detection and Isolation of Exosomes

Muthukumaran Packirisamy, Concordia University, Canada

Abstract 3: 11:15-11:30 PCR measurement of exosomal microRNAs in cancer patient serum samples coupled with a CFDA-approved quick exosome isolation method Tong Wang, Jinan University, Guangzhou, China

11:30 to 13:30 Lunch Break (Yiyuan Restaurant) and Sponsor Exhibition

Topic #2: EV omics analysis and biomarker discovery Chairpersons: (Juan M Falcon Perez, Carolina Soekmadji)

# 13:30-14:00 A decade of asking to the Extracellular Vesicles for low-invasive Biomarkers: achievements and next challenges

Juan M Falcon Perez, CIC bioGUNE, Bizkaia Technology Park, Biscay, Spain

Abstract 4: 14:00-14:15 Anchor peptide captures, targets and loads exosomes of diverse origins for diagnostics and therapy

HaiFang Yin, Tianjin Medical University, China

### 14:15-14:45 Assessment on the heterogeneity of extracellular vesicles in prostate cancer

Carolina Soekmadji, Queensland Institute of Medical Research, Australia

Abstract 5: 14:45-15:00 Lipidomic Analysis of Phospholipids in Exocellular Vesicles Wenpeng Zhang, Tsinghua University, Purdue University, China

15:00-15:30 Coffee Break and Sponsor Exhibition

# 15:30-16: 00 Membrane curvature and lipid composition sensors targeting extracellular vesicles

Hang Hubert Yin, TsingHua University, China

#### 16:00-16:30 EV omics analysis and biomarker discovery

Andrew Hill, La Trobe University, Australia

Abstract 6: 16:30-16:45 Transcriptome and Proteome of Extracellular Vesicles in Diabetic Kidney Target Cells In-Vitro Harry Holthofer, University of Helsinki, Finland

Abstract 7: 16:45-17:00 miRNA exosomal biomarkers in neurodegenerative diseases Lesley Cheng, La Trobe University, Australia

### 17:00-17:10 SPONSORED PRESENTATION: (江苏贝格尔)

#### Roundtable Discussion

Topic #1: EV isolation methods and standardization (Chairpersons: Hang Hubert Yin, Kenneth W. Witwer) (Chunjiang Hall in Qiushuitang Building)

17:10-18:30 Roundtable Discussion 18:30-18:45 Wrap-up

Topic #2: EV omics analysis and biomarker discovery (Chairpersons: Juan M Falcon Perez, Carolina Soekmadji) (Yuese Hall in Qiushuitang Building)

17:10-18:30 Roundtable Discussion 18:30-18:45 Wrap-up

19:00-21:00 Banquet, Southern Hotel

#### Day 3: Tuesday, November 20

Topic #3: EV biomarker detection and application in clinical diagnosis Chairpersons: (Lei Zheng, Ana Claudia Torrecilhas)

# 8:30-9:00 Flow cytometric analysis of the molecular composition of the circulating extracellular vesicle pool

Marca Wauben, Utrecht University, Utrecht, the Netherlands

### 9:00-9:30 Glycosylation of integrins on tumor-derived exosomes involves in cancer progression

Tang-long Shen, National Taiwan University, Taiwan, China

Abstract 8: 9:30-9:45 Lipid Profiling of Extracellular Vesicles Isolated from Different Cell Sources by NanoCytometry and ESI-MS Xiaomei Yan, Xiamen University, Xiamen, China

Abstract 9: 9:45-10:00 Single-exosome-counting immunoassays for cancer diagnostics Lei Zheng, Southern Medical University, China

10:00-10:30 Coffee Break and Sponsor Exhibition

### 10:30-11:00 Extracellular Vesicles Modulate host Immune Response in Protozoa Infection

Ana Claudia Torrecilhas, Universidade Federal de São Paulo, São Paulo, Brazil

Abstract 10: 11:00-11:15 Exosome contained Long Non-coding RNA, CoroMarker, a Novel Biomarker for Diagnosis of Coronary Artery Disease Yue Cai, Daping hospital, Third military medical university, China

Abstract 11: 11:15-11:30 Diagnostic value of brain tissue and plasma derived extracellular vesicle microRNAs in SIV-infected pigtailed macaques Yiyao Huang, Nanfang Hospital, Southern Medical University, China

11:30-13:30 Lunch Break (Yiyuan Restaurant) and Sponsor Exhibition

### Topic #4: EV-based therapy in human disease Chairpersons: (Minh T.N. Le, Sai Kiang Lim)

#### 13:30-14:00 Pluripotent stem cell derived exosomes for regenerative medicine

Yang Wang, Institute of Microsurgery on Extremities, Shanghai Jiaotong University Affiliated Sixth People' Hospital, China

# 14:00-14:30 Exploiting the unique protein and lipid permutation in different plasma EV types for biomarker discovery

Sai Kiang Lim, Institute of Medical Biology, Singapore

Abstract 12: 14:30-14:45 Umbilical cord mesenchymal stem cell EV based disease prevention and therapy

Yongmin Yan, Jiangsu University, China

Abstract 13: 14:45-15:00 HIV-specific antibody mediated targeting of ENV+ tissues by exosomes

Xue Zou, Nanjing University, China

15:00-15:30 Coffee break and Sponsor Exhibition

### 15:30-16:00 Harnessing extracellular vesicles from human red blood cells for gene therapies against cancer

Minh T.N. Le, City University of Hong Kong, Hong Kong, China

Abstract 14: 16:00-16:15 Use of helminth EVs to control parasitic and autoimmune diseases

Antonio Marcilla, Universitat de Valencia, Spain

16:15-16:25 SPONSORED PRESENTATION: (Sagene, 广州赛哲)

16:25-16:35 SPONSORED PRESENTATION: (Izon Science)

#### **Roundtable Discussion**

Topic #3: EV biomarker detection and application in clinical diagnosis (Chairpersons: Lei Zheng, Ana Claudia Torrecilhas)

(Chunjiang Hall in Qiushuitang Building)

16:35-17:55 Roundtable Discussion

17:55-18:10 Wrap-up

Topic #4: EV-based therapy in human disease (Chairpersons: Minh T.N. Le, Sai Kiang Lim)

(Yuese Hall in Qiushuitang Building)

16:35-17:55 Roundtable Discussion

17:55-18:10 Wrap-up

18:10-18:30 Closing Remarks & Farewell

19:00-21:00 Farewell dinner, Huiqiao Building