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# **KHUPO 16<sup>TH</sup> ANNUAL INTERNATIONAL PROTEOMICS CONFERENCE**

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**「Proteomics as a melting pot of omic  
technologies」**

**March 28 (Mon) -29 (Tue), 2016**

**Grand Ballroom (2F), Daejeon Convention Center, Daejeon, Korea**

**THE KOREAN HUMAN PROTEOME ORGANIZATION**

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## WELCOME MESSAGE

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Dear Colleagues,

We are delighted to announce that the Korean Human Proteome Organization (KHUPO) 16th Annual International Proteomics Conference will be held at Daejeon Convention Center in Daejeon, Korea from 28 to 29, March 2016. On behalf of the Organizing Committee of the KHUPO, I would like to cordially invite all the speakers and participants from the abroad and domestic in this 16th Annual International Conference. We come together annually to discuss about the most recent advances in proteomics technology and its present and future applications to clinical fields.

The theme of this year is “Proteomics as a melting pot of omic technologies”. For this meeting, four plenary lectures and six symposia are planned and numerous distinguished scientists in the field were invited. The session for young scientists is also included to encourage the junior scientists. I am very confident that this meeting will provide an excellent opportunity to share the prominent results of proteomics and protein based translational research.

As KHUPO is already entering its 16th year of maturation, I hope all the efforts and activities of KHUPO will serve as the main core for the human health by exploring the translational relevancy of all proteins and their variants to human biology and disease.

Finally, I welcome you all and hope that 16th Annual International Conference of KHUPO serves as a major scientific forum for the concerted research among proteome scientists and clinicians, linking between Korea and the rest of the world.

With best wishes,

*Byoung Chul Park*

**Byoung Chul Park, Ph.D**

President, The Korean Human Proteome Organization

Principal Research Scientist, KRIBB

Professor, University of Science and Technology

## GENERAL INFORMATION

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### Conference Information

- Date: March 28 (Monday) – 29 (Tuesday), 2016
- Venue: Grand Ballroom (2F), Daejeon Convention Center, Daejeon, KOREA
- Theme: "Proteomics as a melting pot of omic technologies"
- Official Language: English
- Organizers: The Korean Human Proteome Organization (KHUPO)

### Contact Us

The Korean Human Proteome Organization (KHUPO)

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URL: <http://www.khupo.org>

## ORGANIZING COMMITTEE

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<b>President</b>	Byoung Chul Park (Korea Research Institute of Bioscience & Biotechnology)
<b>Vice President</b>	Jong Hoon Park (Sookmyung Women's University) Sang Won Kang (Ewha Womans University) Je-Yoel Cho (Seoul National University) Jin Han (Inje University) Hun Choi (SCINCO Co. Ltd)
<b>Secretary General</b>	Cheolju Lee (Korea Institute of Science and Technology)
<b>Secretary of Academic Affair</b>	Kwang Pyo Kim (Kyung Hee University) Kwang-Hee Bae (Korea Research Institute of Bioscience & Biotechnology)
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<b>Secretary of Financial Affair</b>	Hyun Joo An (Chungnam National University) Jong-Soon Choi (Korea Basic Science Institute)
<b>Secretary of Editorial Affair</b>	Hookeun Lee (Gachon University) Byong Chul Yoo (National Cancer Center)
<b>Secretary of Education</b>	Jae Ho Kim (Pusan National University) Jeong Hee Moon (Korea Research Institute of Bioscience & Biotechnology)
<b>Secretary of International Cooperation</b>	Ji Eun Lee (Korea Institute of Science and Technology) Kang-Sik Park (Kyung Hee University)
<b>Secretary of Membership</b>	Sayeon Cho (Chung-Ang University) Hye-Jung Kim (KBIO New Drug Development Center)
<b>Secretary of Advertising</b>	Sung Goo Park (Korea Research Institute of Bioscience & Biotechnology) Kyunghee Byun (Gachon University)
<b>Secretary of Public Relation</b>	Seok Jeong (Dong-il SHIMADZU Corp.) Byung-Hee Shin (SCIEX Korea)
<b>Chair, Committee for Election Affair</b>	Tae-Hoon Lee (Chonnam National University)
<b>Chair, Committee for Fund-Raising Affair</b>	Bonghee Lee (Gachon University)

## PROGRAM AT A GLANCE

Time	March 28(Mon)	March 29(Tue)
08:00	Registration (08:00-18:00)	Registration (08:00-18:00)
	Morning Coffee (08:30-09:10)	Morning Coffee (08:30-09:00)
09:00	Opening Ceremony (09:10-09:20)	PL-3 (09:00-09:40)
	PL-1 (09:20-10:00)	Break (09:40-09:55)
10:00	Break (10:00-10:15)	SYM-4 Proteomics in multi-disciplinary approaches (09:55-11:25)
	SYM-1 Proteomics for overcoming metabolic diseases (10:15-11:25)	
11:00	Break (11:25-11:40)	Break (11:25-11:40)
12:00	SYM-2 Proteomics for understanding brain functions (11:40-12:50)	SYM-5 Proteomics for precision medicine (11:40-12:50)
13:00	Corporate Workshop - 1 (12:50-13:30)	Corporate Workshop - 2 (12:50-13:30)
	Break (13:30-13:40)	Break (13:30-13:40)
14:00	Poster (13:40-15:50)	Poster (13:40-15:50)
15:00	Exhibition Tour (13:40-15:50)	Young Scientists (14:30-15:40)
	Break (15:50-16:00)	Break (15:50-16:00)
16:00	PL-2 (16:00-16:40)	PL-4 (16:00-16:40)
	Break (16:40-16:50)	Break (16:40-16:50)
17:00	SYM-3 New innovations in proteomics (16:50-18:00)	SYM-6 Proteomics for stem cell medicine (16:50-18:00)
18:00	KHUPO General Assembly (18:00-18:20)	Awards & Closing Remark (18:00-18:20)
	Welcome Reception (18:20-)	

\* This schedule is subject to change without notice.

## PLENARY LECTURES

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### Plenary Lecture 1

**Mar. 28 (Mon) 09:20-10:00**

**Chair: Kyung Soo Hahm** (BioLeaders Corp., Korea)

TBA

**Hee-Sup Shin** (*Institute for Basic Science, Korea*)

### Plenary Lecture 2

**Mar. 28 (Mon) 16:00-16:40**

**Chair: Young-Ki Paik** (Yonsei University, Korea)



Democratization of advances in quantitative proteomics: Multi-omic approaches to biomarker discovery

**Robert Moritz** (*Institute for Systems Biology, USA*)

### Plenary Lecture 3

**Mar. 29 (Tue) 09:00-09:40**

**Chair: Chan-Wha Kim** (Korea University, Korea)



CRISPR RNA-guided Genome Editing in Human Stem Cells, Animals, and Plants

**Jin-Soo Kim** (*Institute for Basic Science/Seoul National University, Korea*)

### Plenary Lecture 4

**Mar. 29 (Tue) 16:00-16:40**

**Chair: Jong Shin Yoo** (Korea Basic Science Institute, Korea)



Proteomics from Target Discovery to Drug Discovery

**Kong-Joo Lee** (*Ewha Womans University, Korea*)

## SYMPOSIA

### Symposium 1

#### Proteomics for overcoming metabolic diseases

Mar 28 (Mon) 10:15-11:25

Chairs: **Je Kyung Seong** (Seoul National University, Korea),  
**Geum-Sook Hwang** (Korea Basic Science Institute, Korea)

- (SYM1-1) **10:15-10:33** Development of Multimarker Panel for Early Detection of Diabetic Retinopathy Using LC/MRM-MS and Antibody-Based Verification  
**Youngsoo Kim** (Seoul National University, Korea)
- (SYM1-2) **10:33-10:51** Role of sphingosine 1-phosphate in fatty liver and obesity  
**Tae-Sik Park** (Gachon University, Korea)
- (SYM1-3) **10:51-11:08** Lipidomic profiling of liver tissue from obesity-prone and obesity-resistant mice fed a high fat diet  
**Geum-Sook Hwang** (Korea Basic Science Institute, Korea)
- (SYM1-4) **11:08-11:25** Transcriptome Profiles on Weight Cycling Model Mice in White Adipose Tissue  
**SooYoung Cho** (Seoul National University, Korea)

### Symposium 2

#### Proteomics for understanding brain functions

Mar 28 (Mon) 11:40-12:50

Chairs: **Ho Jeong Kwon** (Yonsei University, Korea), **Ji Eun Lee** (KIST, Korea)

- (SYM2-1) **11:40-12:00** New methods for qualitative and quantitative proteome analysis  
**Lihua Zhang** (Chinese Academy of Science, China)
- (SYM2-2) **12:00-12:20** TBA  
**Young Mok Park** (Institute for Basic Science, Korea)
- (SYM2-3) **12:20-12:35** Functional Proteomics for Learning and Memory Disorders  
**Myoung-Goo Kang** (Institute for Basic Science, Korea)
- (SYM2-4) **12:35-12:50** Cyclin Y inhibits AMPA receptor exocytosis during long-term potentiation  
**Mikyung Park** (Korea Institute of Science and Technology, Korea)

### Symposium 3

#### New innovations in proteomics

Mar 28 (Mon) 16:50-18:00

Chairs: **Yongwon Jung** (KAIST, Korea), **Jun-Seok Lee** (KIST, Korea)

- (SYM3-1) **16:50-17:04** A Quantitative Mass Spectrometry-Based Assay for the Clinical Analysis of Parathyroid Hormone and Its Heterogeneous Oxidized and Truncated Post Translational Modifications  
**Gavin E. Reid** (University of Melbourne, Australia)



- (SYM3-2) **17:04-17:18** Large-scale identification of glycoproteins carrying Lewis x and site-specific glycan alterations in Fut9 knockout mice  
**Erika Noro** (*National Institute of Advanced Industrial Science and Technology (AIST), Japan*)
- (SYM3-3) **17:18-17:32** Targeting Protein-Protein Interactions Using Proteomimetics  
**Hyun-Suk Lim** (*POSTECH, Korea*)
- (SYM3-4) **17:32-17:46** Phosphohistidine, a Dark Matter in the Phosphoproteome  
**Jung-Min Kee** (*UNIST, Korea*)
- (SYM3-5) **17:46-18:00** Spot-ID: Identification of Biotin-Labeled Sites by APEX-and pBirA for In Vivo Interactome Mapping  
**Hyun-Woo Rhee** (*UNIST, Korea*)

## Symposium 4

**Proteomics in multi-disciplinary approaches****Mar 29 (Tue) 09:55-11:25**

Chairs: **Ji-Joon Song** (KAIST, Korea), **J. Eugene Lee** (Korea Research Institute of Standards and Science, Korea)

- (SYM4-1) **09:55-10:15** Proteomic technique to identify the abiotic stress tolerant mechanism in crop  
**Setsuko Komatsu** (*National Institute of Crop Science, Japan*)
- (SYM4-2) **10:15-10:35** Developments in Glycoproteomics Facilitate the Discovery of a New Class of Functionally Important Cancer and Inflammation-Centric Human Glycoproteins  
**Morten Thaysen-Andersen** (*Macquarie University, Australia*)
- (SYM4-3) **10:35-10:55** Proteomics analysis of antique glue on a Stradivari violin  
**Hwan-Ching Tai** (*National Taiwan University, Taiwan*)
- (SYM4-4) **10:55-11:10** Analytical Platform for High-Throughput Measurement of in-vivo Turnover Rates of Biomolecules  
**Tae-Young Kim** (*Gwangju Institute of Science and Technology, Korea*)
- (SYM4-5) **11:10-11:25** Extractive Ambient Ionization Mass Spectrometry for Protein Analysis  
**Sangwon Cha** (*Hankuk University of Foreign Studies, Korea*)

## Symposium 5

**Proteomics for precision medicine****Mar 29 (Tue) 11:40-12:50**

Chairs: **Eugene C. Yi** (Seoul National University, Korea), **Kyunggon Kim** (Ulsan University, Korea)

- (SYM5-1) **11:40-12:05** Mining drug-resistant target from large-scale determination of absolute phosphorylation stoichiometries in cancer cell  
**Yu-Ju Chen** (*Academia Sinica, Taiwan*)
- (SYM5-2) **12:05-12:28** Patient-derived xenograft model for breast cancer research  
**Hyeong-Gon Moon** (*Seoul National University, Korea*)

(SYM5-3) 12:28-12:50 Novel Proteoforms: Databases, Search Strategy, and Validation  
**Eunok Paek** (*Hanyang University, Korea*)

Symposium 6

**Proteomics for stem cell medicine**

**Mar 29 (Tue) 16:50-18:00**

Chairs: **Bonghee Lee** (Gachon University, Korea), **Jae Ho Kim** (Pusan National University, Korea)

(SYM6-1) 16:50-17:15 Ultra-sensitive proteomics technology for deep proteome profiling of stem cells and cell microenvironment  
**Ruijun Tian** (*South University of Science and Technology of China, China*)

(SYM6-2) 17:15-17:38 Regulation of stemness via post-translational modification of Oct4  
**Hyonchol Jang** (*National Cancer Center, Korea*)

(SYM6-3) 17:38-18:00 Cell-based phage display panning for surfaceome  
**Eugene C. Yi** (*Seoul National University, Korea*)

## YOUNG SCIENTISTS

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### Oral Presentation: Young Scientists Session

The Deadline of the Oral Presentation Registration on Young Scientists session: March 13, 2016

In addition to your talk, you will be given the opportunity to prepare for a poster and have it displayed in the Exhibit Hall for the entire duration of the Conference. Please see Poster Presentation information below for further instructions.

- Oral presenter selection : March 16, 2016
- The number of Oral Presenters : 7 people
- The number of recipients for the Young Scientists Award : 5 people
- Official Language: English
- Evaluation factors : Clarity in presentation of data, importance of the work presented, and presentation timing

### Guidelines for the Oral Presentation

- All presenters are required to give a lecture in English for 10 minutes (Q&A included). Time Limits will be strictly enforced.
- Hand over your presentation file to the Speaker's Lounge (onsite) at least 1 hour earlier than your presentation time.
- Check KHUPO2016 conference website for updated presentation schedules and further instructions.

### Young Scientist Award

- Qualification : Poster presenters
- The number of people : 20 people
- Award details : Cash prize and Certificate of award
- Date : March 29 (Tue) 18:00 (Awards & Closing Remarks)
- Reviewer : Invited Speakers at KHUPO 2016 conference

## CORPORATE WORKSHOP

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Workshop-1	Dong-il SHIMADZU Corp.		March 28 (Mon) 12:50 – 13:30
	(CW-1)	Advanced fluorescent chemical probes for detecting metabolites in live cells <b>Ji-young Bae</b> ( <i>Dong-il Shimadzu Corp.</i> )	
Workshop-2	Bruker Korea Co., Ltd		March 29 (Tue) 12:50 – 13:30
	(CW-2)	High-Throughput MALDI Imaging of Tissue: Taking Proteomics into the 2 <sup>nd</sup> and 3 <sup>rd</sup> Dimensions <b>Shannon Cornett</b> ( <i>Bruker Daltonics</i> )	

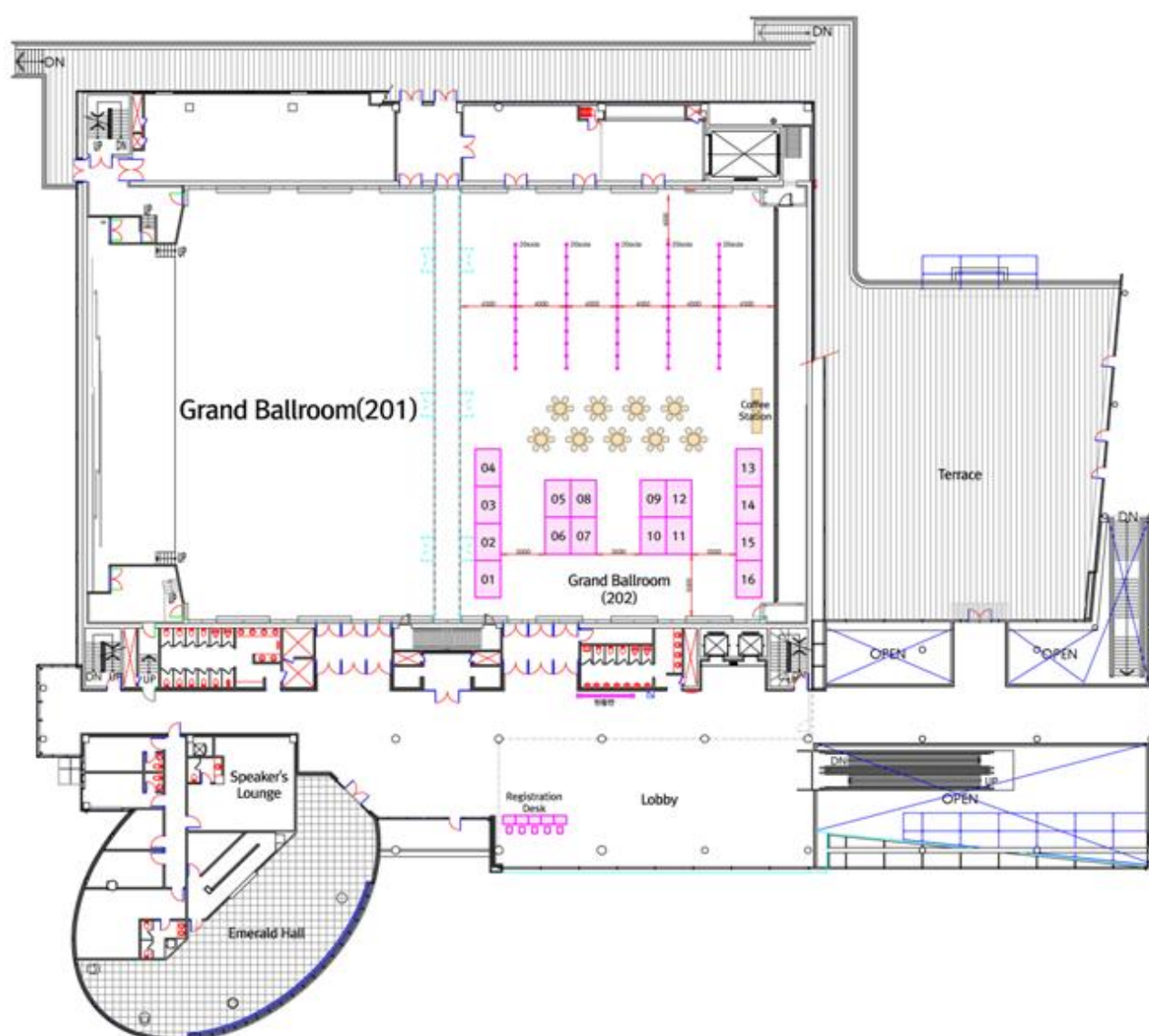
※ Lunch Box will be given to all of participants in CW-1 and CW-2.

## EXHIBITION

### 1. Exhibition Session Information

- Date : March 28 (Mon) – 29 (Tue), 2016
- Place : Grand Ballroom (2F), Daejeon Convention Center, Daejeon, Korea

### 2. Booth Map



**Daejeon Convention Center (2F)**  
**- 201 : Conference Room, 202 : Exhibition and Poster Session Area -**

## POSTER SESSION

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All Posters will be displayed for the entire duration of the conference in the Grand Ballroom (202-ho) at Daejeon Convention Center.

### 1. Poster Presentation Categories

Categories
1) Proteomics for overcoming metabolic diseases
2) Proteomics for understanding brain functions
3) New innovations in proteomics
4) Proteomics in multi-disciplinary approaches
5) Proteomics for precision medicine
6) Proteomics for stem cell medicine

### 2. Poster Presentation Time

- Presenters with odd-numbered posters should stand by their posters at 14:30-15:30 on March 28(Mon).
- Presenters with even-numbered posters should stand by their posters at 14:30-15:30 on March 29(Tue).
- Because invited speakers will give scores in this time for the poster award, poster presenters should be in front of the poster board during this time.
- A poster number will be assigned to each abstract after March 14(Mon).

### 3. Poster Size

- 90cm wide x 120cm high (Board size: 95cm wide x 165cm high)

### 4. Poster Installation and Removal

- Setup hours: March 28(Mon) 08:00 – 09:00
- Take down hours: March 29(Tue), after 18:00, any posters not removed by 18:00 will be discarded.
- Place : Grand Ballroom (2F, 202ho), Daejeon Convention Center

## AWARDS INFORMATION

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### Young Scientist Awards

- Qualification : Poster presenters
- The number of people : 20 people
- Award details : Cash prize and Certificate of award
- Date : March 29(Tue) 18:00 (Awards & Closing Remarks)
- Reviewer : Invited Speakers at KHUPO 2016 conference
- Sponsor : TBA

The winners of the poster awards should attend the closing ceremony at 18:00 on March 29(Tue).

## SPONSORS

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## CONFERENCE VENUE

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### Daejeon Convention Center

- 107 Expo-ro, Yuseong-gu, Daejeon 34125, Korea
- <http://dcckorea.or.kr>

KHUPO 16th Annual International Proteomics Conference will take place at Grand Ballroom (2nd Floor) of the Daejeon Convention Center (DCC). The Daejeon Convention Center is located in the Daedeok Science Complex, the heart of Science City Daejeon.

The DCC looks down on the Gapcheon river, where Daejeon citizen enjoy the recreation and picnics. It is only 10-minute walking distance from the DCC to Daejeon Culture & Arts Center, Municipal Museum of Arts, Hanbat Arboretum which is the Korea's biggest artificial metropolitan arboretum. Moreover, there are Daedeok Innopolis, National Science Museum, and Expo Park near by the DCC, which provide experiences to the latest science and technology. A lot of wonderful hotels, restaurants and stores are located closer to DCC within 10~20min. Car distance and diverse travel sources around DCC will make your visit to Korea more exciting and rewarding.

## TRANSPORTATION

### ► Way by Airplane (Incheon International Airport)

#### # 1 : Incheon Int'l Airport -> Daejeon Government Complex -> Hotel or Daejeon Convention Center

1) Take an airport limousine bus from Incheon International Airport to Daejeon at 9D Exit (1<sup>st</sup> Floor) and get off at the Daejeon Government Complex bus stop. The bus takes off from the airport every 10~20 minutes or so. Depending on traffic conditions, the bus ride to Daejeon Government Complex will take 180~200 minutes.

> Incheon International Airport (<http://www.airport.kr/eng/>)

Limousine Bus [Daejeon(Deluxe)]			
Time to destination	Approximately 180~200 minutes (approximately 195km)		
Fare	23,100 won (Adult) / 25,400 won (Night)		
Station	Daeduk Convention Center → <b><u>Daejeon Government Complex</u></b> → Dongbooo Cross-Country Bus Terminal Center		
Bus stop No.	Incheon International Airport (1F) 9D		
To Incheon	03:20~19:10	To Daejeon	06:00~23:30
Interval	20~40min.	Operation Hour	180~200 minutes
Where to buy tickets	Seoulbus Limousine Bus Stops		
Contact	+82-42-584-7770		

2) Take a taxi to get to Daejeon Convention Center upon arrival at Government Complex Daejeon bus stop. It takes you around 5~10 minutes by taxi and cost about KRW 4,000.

#### # 2 : Incheon International Airport -> Seoul Station -> Daejeon Station -> Hotel or Daejeon Convention Center

##### 1) Incheon Int'l Airport ⇒ Seoul Station

##### ① By Airport limousine bus

Purchasing Limousine Bus tickets, and also can get information at Bus Ticketing Office: Exit 4, 9 (Indoors), Exit 4, 6, 7, 8, 11, 13 and 9C (Outdoors). Please take a Limousine Standard Bus (No. 6015) at Bus stop 12A, 5B or a Limousine Deluxe Bus (No. 6001) at Bus Stop 6A, 12B.

Bus stop	Bus	First Departure	Last Departure	Operation Hour	Interval	Fare(KRW)
12A, 5B	Limousine (Standard, 6015)	05:35	22:50	80 mins.	20~35min	10,000
6A, 12B	Limousine (Deluxe, 6001)	05:50	22:40	80 mins.	20~30min	14,000

## ② By Subway (<http://www.arex.or.kr/main.do>)

Please take AREX(Airport Railroad train) at Incheon International Airport Station, then take off the Train at Seoul Station (KTX).

 Transfer
  Express Train
  All-stop Train



Train	First Departure	Last Departure	Operation Hour	Interval	Fare(KRW)
<b>Express</b>	05:20	21:40	43 mins.	30~40min	8,000
<b>All-stop</b>	05:23	23:42	56 mins.	5~18min	4,250

## ③ By Taxi

Alternatively, take a standard taxi or a deluxe taxi to Seoul Station. To take a taxi, please use the taxi stop in front of the passenger terminal of Incheon Int'l Airport.

Fares : approximately 50,000 won (Standard Taxi)

**2) Seoul Station -> Daejeon Station**

Use KTX of Gyeongbu Line and take off at Daejeon station (Please check the exact departure time, number of train and seat). It will take approximately 1 hour.

First Departure	Last Departure	Fare(KRW)		
		First class	Standard class	Standing/Not assigned
05:10	23:30	33,200	33,200	20,100

**3) Daejeon Station ⇒ DCC (Daejeon Convention Center)**

We strongly recommend that you take a taxi to get to Daejeon Convention Center upon arrival at Daejeon Station. There are always some taxis in front of Daejeon Station. After getting in a taxi, please tell the driver the Daejeon Convention Center. It will take you about 10~15 minutes and cost about KRW 7,000~8,000.