

## THE ROLE OF NUCLEOPORIN NUP58 DURING MITOSIS

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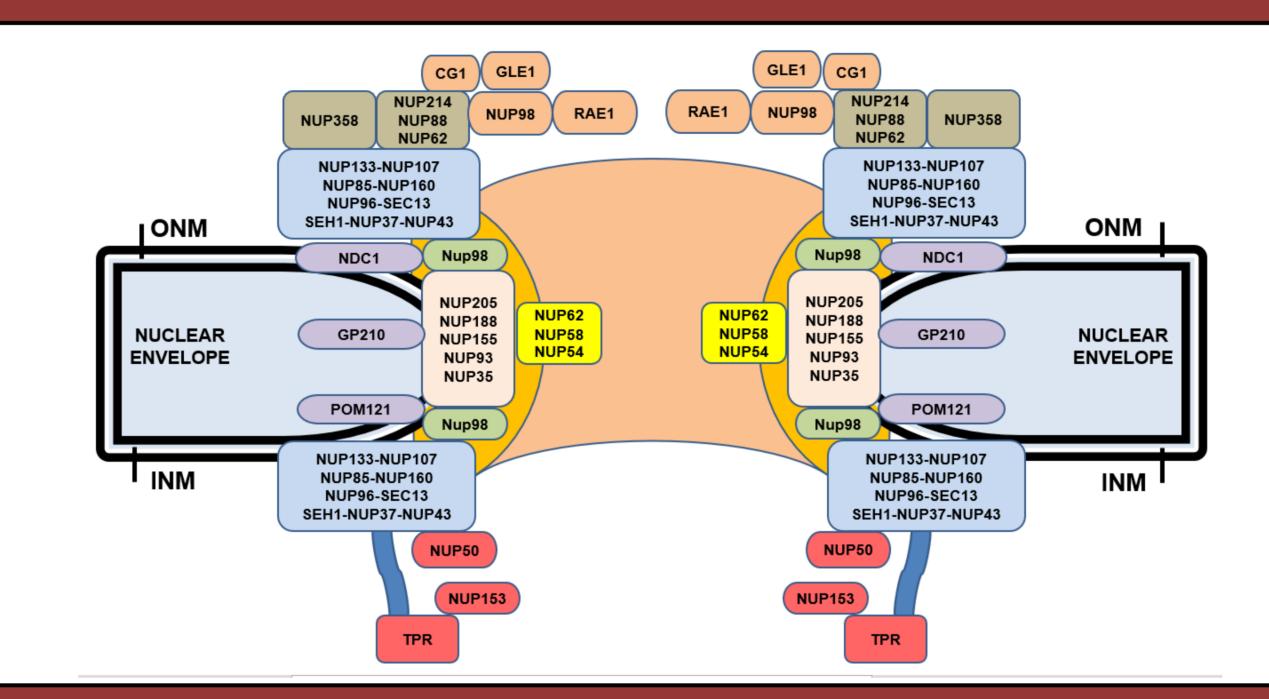
## **ABSTRACT**

Nuclear pore complexes (NPCs) are transport channels between the nucleus and the cytoplasm. The NPCs are composed by around 30 different proteins, termed nucleoporins (Nups) and each Nup is present in multiple copies. Recently, we and others discovered that several nucleoporins play critical roles during cell division including chromosome condensation, sister chromatid cohesion, kinetochore assembly and spindle formation. Nup58 is a part of the central transport channel of the NPC, which forms a complex protein with other nucleoporins such as Nup62 and Nup54. Recently, we showed that Nup62 plays a novel role in centrosome integrity. Here, we show that Nup62 interacts with Nup58 during cell mitosis. Next, we performed RNA interference-mediated knockdown of Nup58. Currently, we are investigating nup58 depletion effect in cell cycle.

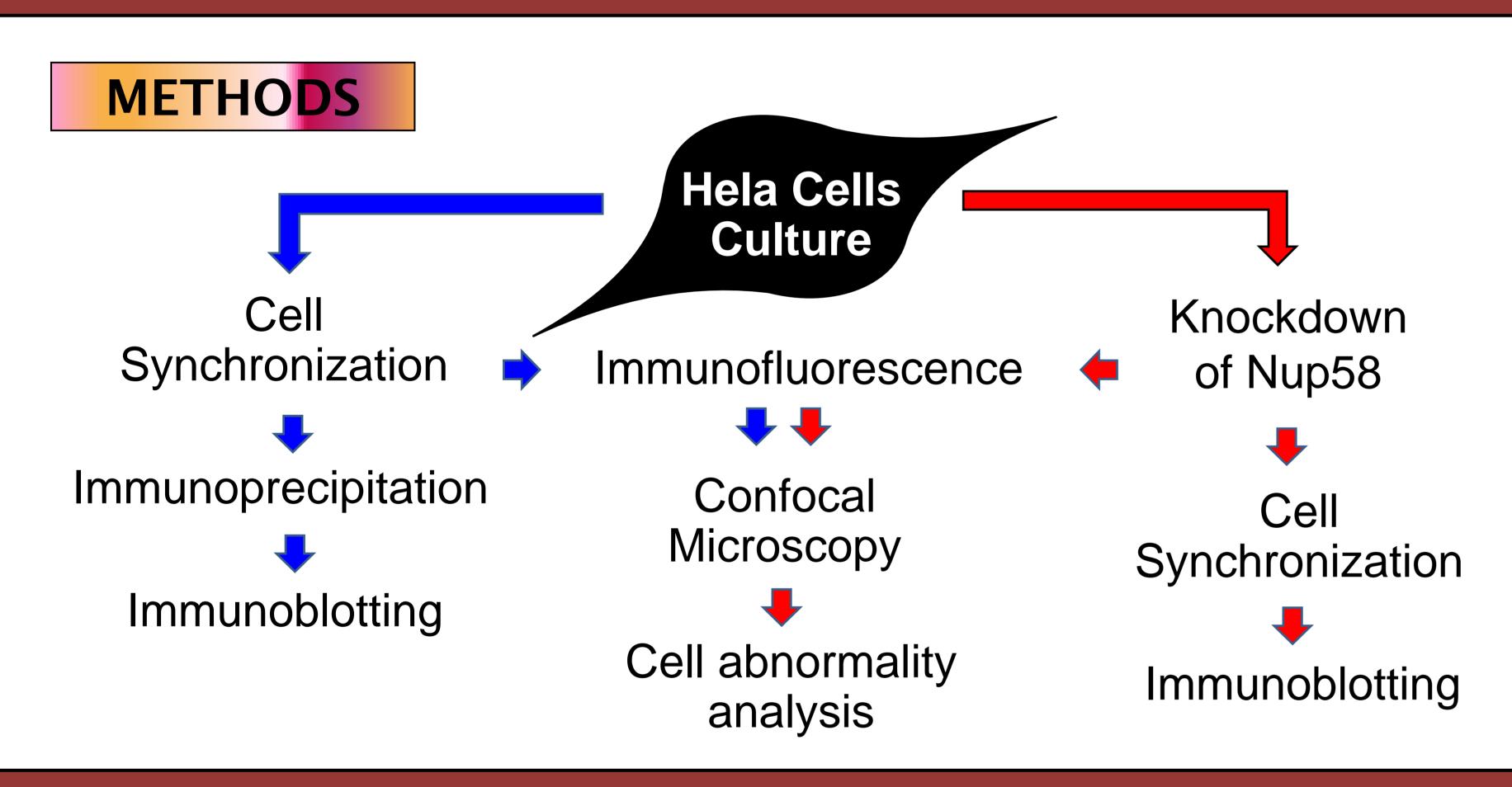
Keywords: NPC, Nucleoporin, Nup58, mitosis

## BACKGROUND

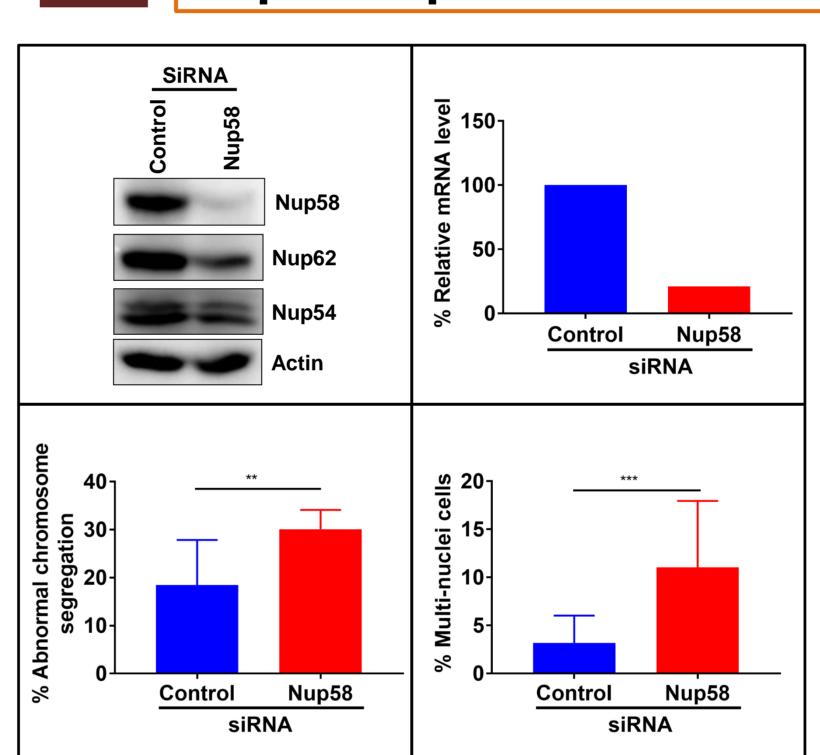
- Nuclear pore complexes (NPCs) are composed by around 30 different proteins, termed nucleoporins (Nups).
- The central channel of NPC consists of nup62 complex.



- Nup62 have a novel role in centrosome integrity and spindle orientation during cell division.
- ➤ Does Nup58 form a complex with nup62 and Nup54 during mitosis?
- ➤ Does Nup58 play a role during cell division?



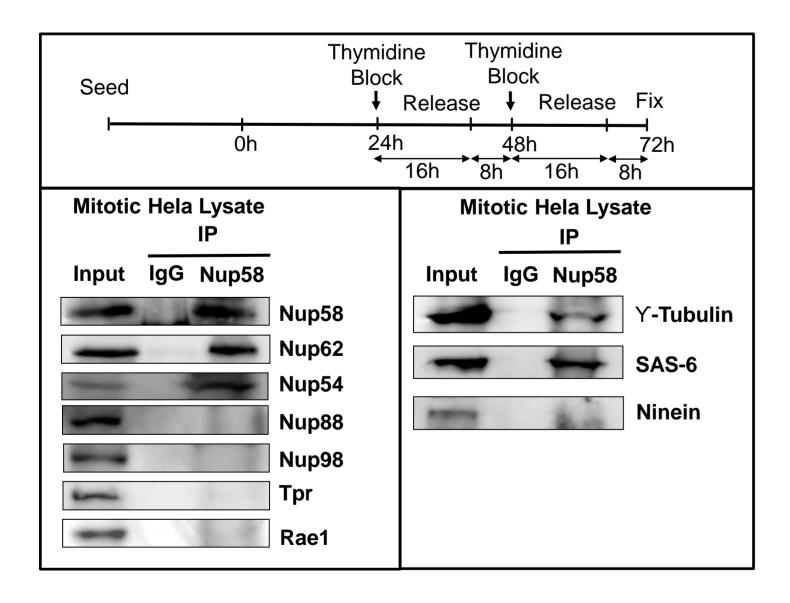
## Nup58 depletion induced cell abnormality



- SiRNA-mediated knockdown of Nup58 affected Nup62 and Nup54 protein level.
- SiRNA-mediated knockdown of Nup58 induced abnormal centrosome segregation and multi-nuclei cells.

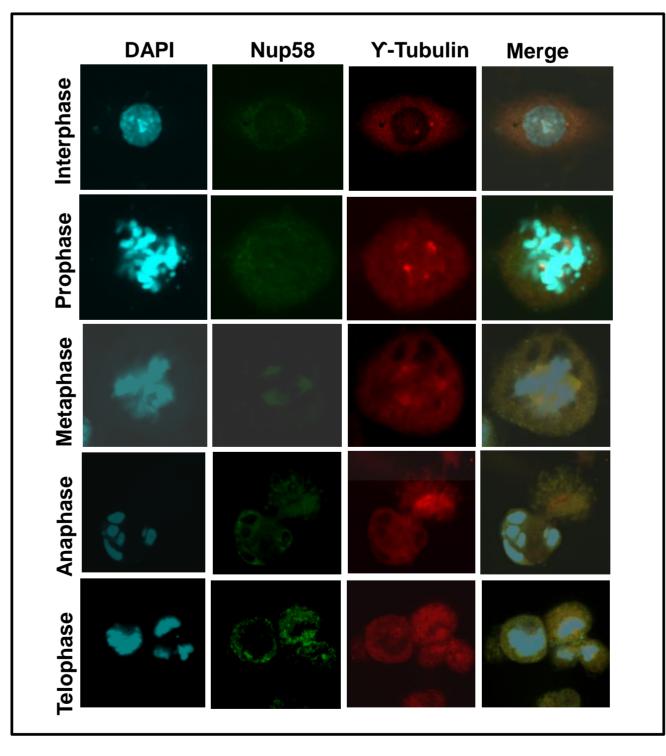
## RESULTS

Nup58 interaction with members of Nup62 complex and centrosomal marker proteins during mitosis



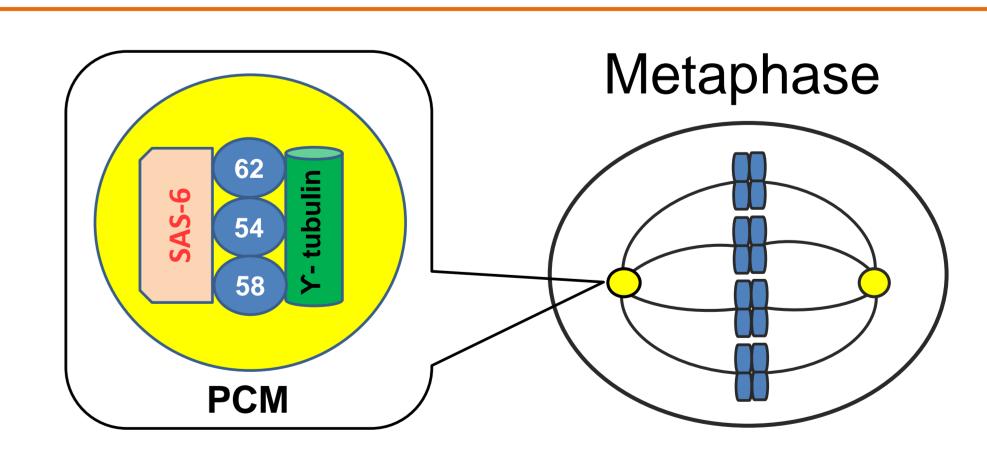
- ➤ Nup58 has specific interaction with members of Nup62 complex protein such as Nup62 and Nup54 during cell mitosis.
- ➤ Nup58 interacts with some centrosome markers protein such as Y- tubulin and SAS-6.

## Nup58 depletion induced chromosome aberration

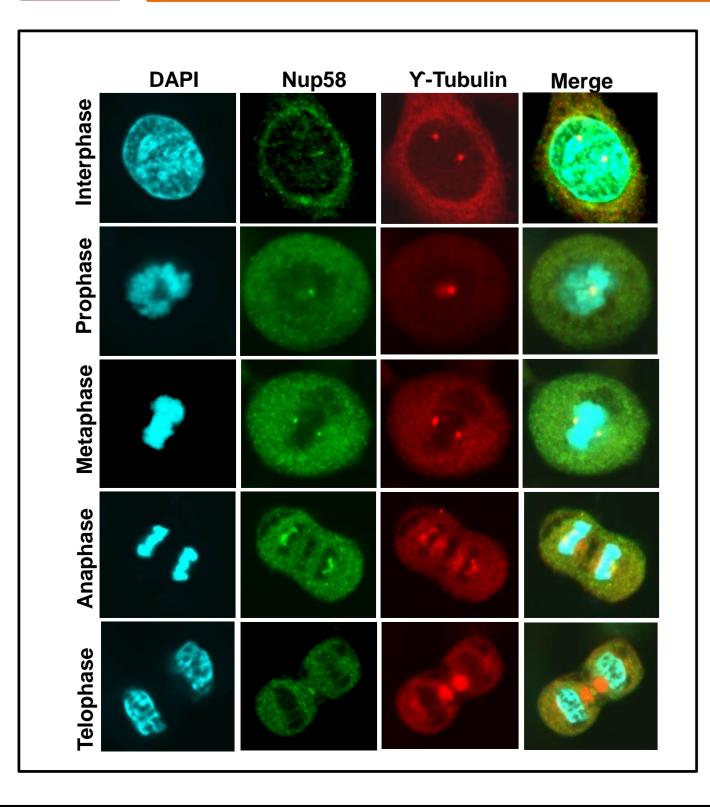


➤ siRNA-mediated knockdown of Nup58 induced chromosome aberration

# Speculative working model for Nup58 in the centrosome



## Nup58 localization during cell division



- Nup58 was distributed on the nuclear envelope with typical nuclear rim staining during interphase.
- From prophase to anaphase, Nup58 was localized to the centrosome and overlapped with Y- tubulin.
- ➤ At telophase, Nup58 was detected in the cytoplasm.

## CONCLUSIONS

- ➤ Nup58 interacted with Nup62, Nup54, and centrosome markers protein such as Y- tubulin and SAS-6 during cell mitosis.
- ➤ Nup58 was localized to the centrosome and overlapped with Y-tubulin during cell division.
- ➤ Nup58 depletion induced abnormal centrosome segregation, multinuclei cells and chromosome aberration.







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#### COMPOSE

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Abstract Submission Number: FE0167

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Thank you very much for submitting an abstract for ConBio2017. This is to inform that your abstract has been accepted as follows.

Title: THE ROLE OF NUCLEOPORIN NUP58 DURING MITOSIS

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Presentation Style: Poster Presentation Poster Number: 2P-0348 Presentation Date: December 7 (Thu.) Presentation Time: 13:15 - 15:45

(Odd number: 13:15 - 14:30, Even number: 14:30 - 15:45) Place: Poster Hall 1-2 (Kobe Int'l Exhibition Hall No.1 Bldg. 2F)

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#### Poster Timetable

Date: December 6 (Wed) - 8 (Fri) \*Each poster will be displayed for ONE DAY only.

Presentation / Discussion: Odd number 13:15-14:30 Even number 14:30-15:45

Venue: Poster & Exhibition Hall 1-1 (Kobe International Exhibition Hall No.1 Bldg. 1F) Poster No. 0001 ~014

Poster Hall 1–2 (Kobe International Exhibition Hall No.1 Bldg. 2F) Poster No. 0145~061

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Poster & Exhibition Hall 3 (Kobe International Exhibition Hall No.3 Bldg. 1F) Poster No. 1051~146

ex) 1P-0053 (Day 1 / Panel No. 0053)

Day 1   Day 2   Dec. 8 (Fri)					
Dec. 8 (Wed)   Dec. 7 (1hu)   Dec. 8 (Fri)		Categories	Day 1	Day 2	Day 3
2   Lectins		Oatogories	Dec. 6 (Wed)	Dec. 7 (Thu)	Dec. 8 (Fri)
2   Lectins					
2   Lectins	4)		10 0001 0001		
3					
4   Glycomics   2P-0019 ~0025   3P-0001 ~0033     5   Glycopilids   1P-0070 ~ 1P-0089   2P-0026 ~ 0048     7   Bloactive Inids   3P-0034 ~ 0072     8   Stervice Inids   3P-0034 ~ 0072     9   Stervice Inids   3P-0034 ~ 0073     9   Fatty acids and storage lipids   1P-0090 ~ 0095     10   Lipidomics   1P-0090 ~ 0095     11   Others   2P-0049 ~ 0067     10   Lipidomics   1P-0090 ~ 0095     11   Others   3P-0034 ~ 0095     12   Structural biology and prediction of functions   1P-015 ~ 0114     12   Protein folding and quality control   1P-0145 ~ 0173   2P-0119 ~ 0144     13   Protein folding and quality control   1P-0145 ~ 0173   2P-0119 ~ 0144     14   Protein modifications   1P-014 ~ 013   2P-0145 ~ 0157   3P-0145 ~ 0157     15   Proteomics   1P-014 ~ 0213   2P-0145 ~ 0167   3P-0158 ~ 0170     15   Proteomics   1P-014 ~ 0223   2P-0168 ~ 0176   3P-0171 ~ 0180     16   Others   1P-024 ~ 0265   2P-0187 ~ 0201   3P-0181 ~ 0190     10   Catalytic mechanism, regulation, inhibition of enzymes   1P-0243 ~ 0265   2P-0187 ~ 0201   3P-0191 ~ 0208     10   Catalytic mechanism, regulation, inhibition of enzymes   1P-0248 ~ 0265   2P-0187 ~ 0201   3P-0290 ~ 0226     10   Catalytic mechanism, regulation, inhibition of enzymes   1P-0248 ~ 0265   2P-0187 ~ 0201   3P-0290 ~ 0226     11   Catalytic mechanism, regulation, inhibition of enzymes   1P-0248 ~ 0265   2P-0187 ~ 0201   3P-0290 ~ 0226     12   Oxidoreductases and metalloenzymes   1P-0266 ~ 0287   2P-0202 ~ 0216   3P-0209 ~ 0226     13   General enzymes   1P-0288 ~ 0308   2P-0217 ~ 0231   3P-0227 ~ 0243     14   Catalytic mechanism, minimals   1P-0309 ~ 0344   2P-0256 ~ 0275   3P-0244 ~ 0248     15   Structures and functions of the nucleus and organelles   1P-0309 ~ 0344   2P-0256 ~ 0275   3P-0278 ~ 0275	2)	Lectins			
4   Glycomics   2P-0019 ~0025   3P-0001 ~0033     5   Glycopilids   1P-0070 ~ 1P-0089   2P-0026 ~ 0048     7   Bloactive Inids   3P-0034 ~ 0072     8   Stervice Inids   3P-0034 ~ 0072     9   Stervice Inids   3P-0034 ~ 0073     9   Fatty acids and storage lipids   1P-0090 ~ 0095     10   Lipidomics   1P-0090 ~ 0095     11   Others   2P-0049 ~ 0067     10   Lipidomics   1P-0090 ~ 0095     11   Others   3P-0034 ~ 0095     12   Structural biology and prediction of functions   1P-015 ~ 0114     12   Protein folding and quality control   1P-0145 ~ 0173   2P-0119 ~ 0144     13   Protein folding and quality control   1P-0145 ~ 0173   2P-0119 ~ 0144     14   Protein modifications   1P-014 ~ 013   2P-0145 ~ 0157   3P-0145 ~ 0157     15   Proteomics   1P-014 ~ 0213   2P-0145 ~ 0167   3P-0158 ~ 0170     15   Proteomics   1P-014 ~ 0223   2P-0168 ~ 0176   3P-0171 ~ 0180     16   Others   1P-024 ~ 0265   2P-0187 ~ 0201   3P-0181 ~ 0190     10   Catalytic mechanism, regulation, inhibition of enzymes   1P-0243 ~ 0265   2P-0187 ~ 0201   3P-0191 ~ 0208     10   Catalytic mechanism, regulation, inhibition of enzymes   1P-0248 ~ 0265   2P-0187 ~ 0201   3P-0290 ~ 0226     10   Catalytic mechanism, regulation, inhibition of enzymes   1P-0248 ~ 0265   2P-0187 ~ 0201   3P-0290 ~ 0226     11   Catalytic mechanism, regulation, inhibition of enzymes   1P-0248 ~ 0265   2P-0187 ~ 0201   3P-0290 ~ 0226     12   Oxidoreductases and metalloenzymes   1P-0266 ~ 0287   2P-0202 ~ 0216   3P-0209 ~ 0226     13   General enzymes   1P-0288 ~ 0308   2P-0217 ~ 0231   3P-0227 ~ 0243     14   Catalytic mechanism, minimals   1P-0309 ~ 0344   2P-0256 ~ 0275   3P-0244 ~ 0248     15   Structures and functions of the nucleus and organelles   1P-0309 ~ 0344   2P-0256 ~ 0275   3P-0278 ~ 0275	3)	Carbohydrate-related enzymes	1P-0051∼0069	2P-0001~0018	
Silvacipide	4)	Glycomics		2P-0019~0025	
Phospholipids	5)				3P-0001~0033
77   Bioactive lipids   3P-0034~0072			1P-0070~1P-0089	2P-0026~0048	0. 000. 0000
Sterols, steroids, lipoproteins   2P-0049~0067		· · ·	11 0070 11 0000	21 0020 0040	3P-003/1~0072
Path acids and storage lipids		·			
10   Lipidomicis		· · · · · · · · · · · · · · · · · · ·		OD 0040 0007	3F-0073~0061
11   Others			10,0000,0005	2P-0049~0067	
1) Structural biology and prediction of functions					
2   Protein folding and quality control   1P-0145~0173   2P-0119~0144   3P-0119~0145~0157   3P-0145~0157   3P-0145~0157   3P-0145~0157   3P-0158~0170     4   Protein modifications   1P-0194~0213   2P-0158~0167   3P-0158~0170     5   Proteomics   1P-0214~0223   2P-0168~0176   3P-0171~0180     6   Others   1P-0224~0242   2P-0177~0186   3P-0171~0180     7   Others   1P-0224~0242   2P-0177~0186   3P-0181~0190     1   Catalytic mechanism, regulation, inhibition of enzymes   1P-0266~0287   2P-0202~0216   3P-0209~0226     2   Oxidoreductases and metalloenzymes   1P-0268~0287   2P-0202~0216   3P-0209~0226     3   General enzymes   1P-0288~0308   2P-0217~0231   3P-0227~0243     4   Coenzymes, vitamins, minerals   2P-0239~0255     5   Bionerregatics and electron transport chain   2P-0239~0255     6   Others   3P-0244~0248     1   Transporters   3P-0244~0248     1   Transporters   3P-0249~0272   3P-0229~0273   3P-0229~0273     2   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0256~0275   3P-0273~0294   3P-02295~0315     4   Autophagy   3P-0316~0336   3P-0337~0367   3P-0249~0339   3P-0316~0336   3P-0337~0367   3P-0249~0339   3P-0316~0336   3P-0337~0367   3P-0239~0399   3P-0316~0336   3P-0337~0367   3P-0329~04068   3P-0337~0367   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0358~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391	11)	Others	1P-0096 <b>~</b> 0104		
2   Protein folding and quality control   1P-0145~0173   2P-0119~0144   3P-0119~0145~0157   3P-0145~0157   3P-0145~0157   3P-0145~0157   3P-0158~0170     4   Protein modifications   1P-0194~0213   2P-0158~0167   3P-0158~0170     5   Proteomics   1P-0214~0223   2P-0168~0176   3P-0171~0180     6   Others   1P-0224~0242   2P-0177~0186   3P-0171~0180     7   Others   1P-0224~0242   2P-0177~0186   3P-0181~0190     1   Catalytic mechanism, regulation, inhibition of enzymes   1P-0266~0287   2P-0202~0216   3P-0209~0226     2   Oxidoreductases and metalloenzymes   1P-0268~0287   2P-0202~0216   3P-0209~0226     3   General enzymes   1P-0288~0308   2P-0217~0231   3P-0227~0243     4   Coenzymes, vitamins, minerals   2P-0239~0255     5   Bionerregatics and electron transport chain   2P-0239~0255     6   Others   3P-0244~0248     1   Transporters   3P-0244~0248     1   Transporters   3P-0249~0272   3P-0229~0273   3P-0229~0273     2   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0256~0275   3P-0273~0294   3P-02295~0315     4   Autophagy   3P-0316~0336   3P-0337~0367   3P-0249~0339   3P-0316~0336   3P-0337~0367   3P-0249~0339   3P-0316~0336   3P-0337~0367   3P-0239~0399   3P-0316~0336   3P-0337~0367   3P-0329~04068   3P-0337~0367   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0358~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391					
2   Protein folding and quality control   1P-0145~0173   2P-0119~0144   3P-0119~0145~0157   3P-0145~0157   3P-0145~0157   3P-0145~0157   3P-0158~0170     4   Protein modifications   1P-0194~0213   2P-0158~0167   3P-0158~0170     5   Proteomics   1P-0214~0223   2P-0168~0176   3P-0171~0180     6   Others   1P-0224~0242   2P-0177~0186   3P-0171~0180     7   Others   1P-0224~0242   2P-0177~0186   3P-0181~0190     1   Catalytic mechanism, regulation, inhibition of enzymes   1P-0266~0287   2P-0202~0216   3P-0209~0226     2   Oxidoreductases and metalloenzymes   1P-0268~0287   2P-0202~0216   3P-0209~0226     3   General enzymes   1P-0288~0308   2P-0217~0231   3P-0227~0243     4   Coenzymes, vitamins, minerals   2P-0239~0255     5   Bionerregatics and electron transport chain   2P-0239~0255     6   Others   3P-0244~0248     1   Transporters   3P-0244~0248     1   Transporters   3P-0249~0272   3P-0229~0273   3P-0229~0273     2   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0256~0275   3P-0273~0294   3P-02295~0315     4   Autophagy   3P-0316~0336   3P-0337~0367   3P-0249~0339   3P-0316~0336   3P-0337~0367   3P-0249~0339   3P-0316~0336   3P-0337~0367   3P-0239~0399   3P-0316~0336   3P-0337~0367   3P-0329~04068   3P-0337~0367   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0418   3P-0337~0366   3P-0358~0391   3P-0407~0418   3P-0337~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391   3P-0407~0366   3P-0338~0391	1)	Structural biology and prodiction of functions	1P_0105~0144	2P_0069 ~ 0119	3P_0022~0110
Proteloysis					
4   Protein modifications   1P-0194~0213   2P-0158~0176   3P-0158~0170     5   Proteomics   1P-0214~0223   2P-0168~0176   3P-0171~0180     6   Others   1P-0224~0242   2P-0177~0186   3P-0181~0190     7   Catalytic mechanism, regulation, inhibition of enzymes   1P-0268~0287   2P-0187~0201   3P-0191~0208     9   Oxidoreductases and metalloenzymes   1P-0268~0287   2P-0202~0216   3P-0209~0226     10   Catalytic mechanism, regulation, inhibition of enzymes   1P-0268~0287   2P-0202~0216   3P-0209~0226     12   Oxidoreductases and metalloenzymes   1P-0268~0308   2P-0217~0231   3P-0227~0243     13   Coenzymes, vitamins, minerals   2P-0239~0255     14   Ocenzymes, vitamins, minerals   2P-0239~0255     15   Bioenergetics and electron transport chain   2P-039~0255     16   Others   3P-0244~0248     17   Transporters   3P-0249~0272     18   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0256~0275   3P-0249~0272     19   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0276~0289   3P-0290~0315     14   Autophagy   2P-0290~0309   3P-0316~0336   3P-0316~0336     15   Cytosteleton, cell molitity and adhesion, extracellular matrix   1P-0358~0411   2P-0310~0346   3P-0337~0367     16   Cell cycle, cell division, cell polarity   1P-0412~0437   2P-0347~0366   3P-0368~0391     17   Apoptosis and cell death   1P-0438~0467   2P-0367~0381   3P-0392~0406     18   Chromatin and phosphatases   2P-0418~0436   3P-0417~0516   3P-0417~0516   3P-0472~0521     19   Cenome, chromosome, structure and functions of the nucleus   1P-0500~0535   2P-0437~0516   3P-0472~0521     10   Cenome, chromosome, structure and functions of the nucleus   1P-0500~0539   2P-0530~0549   3P-0520~0579					
Proteomics					
Cothers					
1)   Catalytic mechanism, regulation, inhibition of enzymes   1P-0243~0265   2P-0187~0201   3P-0191~0208	5)	Proteomics			
2	6)	Others	1P-0224~0242	2P-0177~0186	3P-0181~0190
2					
2	4)		1D 0040 - 006E	0D 0107 0001	20 0101 - 0200
3   General enzymes   1P-0288~0308   2P-0217~0231   3P-0227~0243					
4)   Coenzymes, vitamins, minerals   2P-0232~0238     5)   Bioenergetics and electron transport chain   2P-0239~0255     6)   Others   3P-0244~0248     1)   Transporters   3P-0249~0272     2)   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0256~0275   3P-0273~0294     31   Intracellular trafficking system   1P-0345~0357   2P-0276~0289   3P-0295~0315     4)   Autophagy   2P-0290~0309   3P-0316~0336     5)   Cytoskeleton, cell motility and adhesion, extracellular matrix   1P-0358~0411   2P-0310~0346   3P-0337~0367     6]   Cell Cycle, cell division, cell polarity   1P-0412~0437   2P-0347~0366   3P-0368~0391     7)   Apoptosis and cell death   1P-0438~0467   2P-0367~0381   3P-0392~0406     8)   Others   2P-0382~0391   3P-0407~0418     1)   Extracellular signaling molecules, receptors, ion channels   1P-0468~0499   2P-0392~0417     2)   Nuclear receptors   2P-0418~0436   3P-0352~0417     2)   Nuclear receptors   2P-0418~0437   3P-0419~0451     4)   Protein kinases and phosphatases   2P-0458~0476   3P-0452~0471     5)   Stress response and redox response   1P-0500~0535   2P-0437~0457   3P-0419~0451     4)   Protein kinases and phosphatases   2P-0458~0476   3P-0452~0471     5)   Stress response and redox response   1P-0536~0589   2P-0477~0516   3P-0472~0521     6)   Others   1P-0590~0617   2P-0517~0529     1)   Genome, chromosome, structure and functions of the nucleus   1P-063~0729   2P-0530~0549   3P-0522~0541     2)   Chromatin and epigenetics   1P-0640~0682   2P-0550~0619   3P-0579~0618     3)   DNA repileation, DNA recombination, DNA mutation and repair   1P-063~0729   2P-0550~0619   3P-0579~0618     4)   Transcriptional regulation   1P-0730~0758   2P-0619~0652   3P-0619~0651     5)   RNA processing, transport and translation, non-coding RNAs   1P-0759~0814   2P-0653~0702   3P-0652~0701     6)   Others   3P-0702~0732   3P-0702~0732   3P-0702~0732   3P-0702~0732   3P-0702~0732   3P-0702~0732   3P-0702~0732   3P-0702~0733   3P-0840~0889   3P-0702~07089   3P-0702~0733   3P-0840~0866					
Simple		· · · · · · · · · · · · · · · · · · ·	1P-0288 <b>∼</b> 0308		3P-0227 <b>~</b> 0243
Transporters	4)	Coenzymes, vitamins, minerals		2P-0232~0238	
1) Transporters 2) Structures and functions of the nucleus and organelles 1P−0309 ~ 0344 2P−0256 ~ 0275 3P−0273 ~ 0294 31 Intracellular trafficking system 1P−0345 ~ 0357 2P−0276 ~ 0289 3P−0295 ~ 0315 4) Autophagy 2P−0290 ~ 0309 3P−0316 ~ 0336 5) Oytoskeleton, cell motility and adhesion, extracellular matrix 1P−0358 ~ 0411 2P−0310 ~ 0346 3P−0337 ~ 0367 6) Cell cycle, cell division, cell polarity 1P−0412 ~ 0437 2P−0347 ~ 0366 3P−0368 ~ 0391 7) Apoptosis and cell death 1P−0438 ~ 0467 2P−0382 ~ 0391 3P−0407 ~ 0418  1) Extracellular signaling molecules, receptors, ion channels 1P−0488 ~ 0499 2P−0392 ~ 0417 2) Nuclear receptors 2P−0418 ~ 0436 3) G proteins and signaling proteins 1P−0500 ~ 0535 2P−0418 ~ 0436 4) Protein kinases and phosphatases 1P−0500 ~ 0535 2P−0477 ~ 0516 3P−0452 ~ 0471 5) Stress response and redox response 1P−0536 ~ 0589 2P−0477 ~ 0516 3P−0472 ~ 0521 6) Others 1P−0590 ~ 0617 2P−0517 ~ 0529  1) Genome, chromosome, structure and functions of the nucleus 1P−0640 ~ 0682 2P−0530 ~ 0549 3P−0579 ~ 0618 3P−0579 ~ 0618 4) Transcriptional regulation 1P−0683 ~ 0729 2P−0580 ~ 0618 3P−0579 ~ 0618 4) Transcriptional regulation 1P−0730 ~ 0758 2P−0619 ~ 0652 3P−0619 ~ 0651 5) RNA processing, transport and translation, non-coding RNAs 1P−0759 ~ 0814 2P−0770 ~ 0702 3P−0770 ~ 0702 3P−0753 ~ 0779 3P−0753 ~ 0799 3P−0753 ~ 0790	5)	Bioenergetics and electron transport chain		2P-0239~0255	
1) Transporters 2) Structures and functions of the nucleus and organelles 1P−0309 ~ 0344 2P−0256 ~ 0275 3P−0273 ~ 0294 31 Intracellular trafficking system 1P−0345 ~ 0357 2P−0276 ~ 0289 3P−0295 ~ 0315 4) Autophagy 2P−0290 ~ 0309 3P−0316 ~ 0336 5) Oytoskeleton, cell motility and adhesion, extracellular matrix 1P−0358 ~ 0411 2P−0310 ~ 0346 3P−0337 ~ 0367 6) Cell cycle, cell division, cell polarity 1P−0412 ~ 0437 2P−0347 ~ 0366 3P−0368 ~ 0391 7) Apoptosis and cell death 1P−0438 ~ 0467 2P−0382 ~ 0391 3P−0407 ~ 0418  1) Extracellular signaling molecules, receptors, ion channels 1P−0488 ~ 0499 2P−0392 ~ 0417 2) Nuclear receptors 2P−0418 ~ 0436 3) G proteins and signaling proteins 1P−0500 ~ 0535 2P−0418 ~ 0436 4) Protein kinases and phosphatases 1P−0500 ~ 0535 2P−0477 ~ 0516 3P−0452 ~ 0471 5) Stress response and redox response 1P−0536 ~ 0589 2P−0477 ~ 0516 3P−0472 ~ 0521 6) Others 1P−0590 ~ 0617 2P−0517 ~ 0529  1) Genome, chromosome, structure and functions of the nucleus 1P−0640 ~ 0682 2P−0530 ~ 0549 3P−0579 ~ 0618 3P−0579 ~ 0618 4) Transcriptional regulation 1P−0683 ~ 0729 2P−0580 ~ 0618 3P−0579 ~ 0618 4) Transcriptional regulation 1P−0730 ~ 0758 2P−0619 ~ 0652 3P−0619 ~ 0651 5) RNA processing, transport and translation, non-coding RNAs 1P−0759 ~ 0814 2P−0770 ~ 0702 3P−0770 ~ 0702 3P−0753 ~ 0779 3P−0753 ~ 0799 3P−0753 ~ 0790	6)	Others			3P-0244~0248
2)   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0256~0275   3P-0273~0294					
2)   Structures and functions of the nucleus and organelles   1P-0309~0344   2P-0256~0275   3P-0273~0294	4)				00 0040 0070
3)   Intracellular trafficking system			15.0000 0011	00.0050 0075	
Autophagy					
5)         Cytoskeleton, cell motility and adhesion, extracellular matrix         1P-0358~0411         2P-0310~0346         3P-0337~0367           6)         Cell cycle, cell division, cell polarity         1P-0412~0437         2P-0347~0366         3P-0368~0391           7)         Apoptosis and cell death         1P-0438~0467         2P-0367~0381         3P-0392~0406           8)         Others         2P-0382~0391         3P-0407~0418           1)         Extracellular signaling molecules, receptors, ion channels         1P-0468~0499         2P-0392~0417           2)         Nuclear receptors         2P-0418~0436         3P-0419~0451           3)         G proteins and signaling proteins         1P-0500~0535         2P-0437~0457         3P-0419~0451           4)         Protein kinases and phosphatases         1P-0536~0589         2P-0437~0516         3P-0452~0471           5)         Stress response and redox response         1P-0536~0589         2P-0477~0516         3P-0472~0521           6)         Others         1P-0619~0639         2P-0530~0549         3P-0522~0541           2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0640~0682         2P-0550~0618         3	3)	Intracellular trafficking system	1P-0345∼0357		
6)         Cell cycle, cell division, cell polarity         1P-0412~0437         2P-0347~0366         3P-0368~0391           7)         Apoptosis and cell death         1P-0438~0467         2P-0367~0381         3P-0392~0406           8)         Others         2P-0382~0391         3P-0407~0418           1)         Extracellular signaling molecules, receptors, ion channels         1P-0468~0499         2P-0392~0417           2)         Nuclear receptors         2P-0418~0436         3P-0419~0451           3)         G proteins and signaling proteins         1P-0500~0535         2P-0437~0457         3P-0419~0451           4)         Protein kinases and phosphatases         2P-0458~0476         3P-0452~0471           5)         Stress response and redox response         1P-0536~0589         2P-0477~0516         3P-0472~0521           6)         Others         1P-0590~0617         2P-0517~0529         3P-0472~0521           1)         Genome, chromosome, structure and functions of the nucleus         1P-0619~0639         2P-0530~0549         3P-0522~0541           2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0519~0651 <tr< td=""><td>4)</td><td>Autophagy</td><td></td><td>2P-0290~0309</td><td>3P-0316∼0336</td></tr<>	4)	Autophagy		2P-0290~0309	3P-0316∼0336
6)         Cell cycle, cell division, cell polarity         1P-0412~0437         2P-0347~0366         3P-0368~0391           7)         Apoptosis and cell death         1P-0438~0467         2P-0367~0381         3P-0392~0406           8)         Others         2P-0382~0391         3P-0407~0418           1)         Extracellular signaling molecules, receptors, ion channels         1P-0468~0499         2P-0392~0417           2)         Nuclear receptors         2P-0418~0436         3P-0419~0451           3)         G proteins and signaling proteins         1P-0500~0535         2P-0437~0457         3P-0419~0451           4)         Protein kinases and phosphatases         2P-0458~0476         3P-0452~0471           5)         Stress response and redox response         1P-0536~0589         2P-0477~0516         3P-0472~0521           6)         Others         1P-0590~0617         2P-0517~0529         3P-0472~0521           1)         Genome, chromosome, structure and functions of the nucleus         1P-0619~0639         2P-0530~0549         3P-0522~0541           2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0519~0651 <tr< td=""><td>5)</td><td>Cytoskeleton, cell motility and adhesion, extracellular matrix</td><td>1P-0358<b>~</b>0411</td><td>2P-0310~0346</td><td>3P-0337<b>~</b>0367</td></tr<>	5)	Cytoskeleton, cell motility and adhesion, extracellular matrix	1P-0358 <b>~</b> 0411	2P-0310~0346	3P-0337 <b>~</b> 0367
7)         Apoptosis and cell death         1P-0438~0467         2P-0367~0381         3P-0392~0406           8)         Others         2P-0382~0391         3P-0407~0418           1)         Extracellular signaling molecules, receptors, ion channels         1P-0468~0499         2P-0392~0417           2)         Nuclear receptors         2P-0418~0436         3P-0419~0451           3)         3 proteins and signaling proteins         1P-0500~0535         2P-0437~0457         3P-0419~0451           4)         Protein kinases and phosphatases         2P-0458~0476         3P-0452~0471           5)         Stress response and redox response         1P-0536~0589         2P-0477~0516         3P-0472~0521           6)         Others         1P-0590~0617         2P-0517~0529         3P-0472~0521           1)         Genome, chromosome, structure and functions of the nucleus         1P-0619~0639         2P-0530~0549         3P-0522~0541           2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0579~0618           4)         Transcriptional regulation         1P-0759~0814         2P-0653~0702         3P-0692~0701	6)	Cell cycle, cell division, cell polarity	1P-0412~0437	2P-0347~0366	
Stracellular signaling molecules, receptors, ion channels   1P-0468~0499   2P-0392~0417					
1) Extracellular signaling molecules, receptors, ion channels 1P-0468 ~ 0499 2P-0392 ~ 0417  2) Nuclear receptors 2P-0418 ~ 0436  3) G proteins and signaling proteins 1P-0500 ~ 0535 2P-0437 ~ 0457 3P-0419 ~ 0451  4) Protein kinases and phosphatases 2P-0458 ~ 0476 3P-0452 ~ 0471  5) Stress response and redox response 1P-0536 ~ 0589 2P-0477 ~ 0516 3P-0472 ~ 0521  6) Others 1P-0590 ~ 0617 2P-0517 ~ 0529  1) Genome, chromosome, structure and functions of the nucleus 1P-0619 ~ 0639 2P-0530 ~ 0549 3P-0522 ~ 0541  2) Chromatin and epigenetics 1P-0640 ~ 0682 2P-0550 ~ 0579 3P-0542 ~ 0578  3) DNA replication, DNA recombination, DNA mutation and repair 1P-0683 ~ 0729 2P-0580 ~ 0618 3P-0579 ~ 0618  4) Transcriptional regulation 1P-0730 ~ 0758 2P-0619 ~ 0652 3P-0619 ~ 0651  5) RNA processing, transport and translation, non-coding RNAs 1P-0759 ~ 0814 2P-0653 ~ 0702 3P-0652 ~ 0701  6) Others 3P-0702 ~ 0732  1) Germ cells and fertilization 1P-0815 ~ 0839 2P-0703 ~ 0722 3P-0733 ~ 0752  2) Embryogenesis, organogenesis, morphogenesis 1P-0840 ~ 0889 2P-0723 ~ 0769 3P-0753 ~ 0799  3) Stem cells and cell differentiation 1P-0890 ~ 0932 2P-0770 ~ 0809 3P-0800 ~ 0839  4) Developmental engineering and regenerative medicine 3P-0840 ~ 0866			11 0400 0407		
2) Nuclear receptors	0)	Others		21 0002 0091	31 0407 0410
2) Nuclear receptors					
3   G proteins and signaling proteins   1P-0500~0535   2P-0437~0457   3P-0419~0451     4	1)	Extracellular signaling molecules, receptors, ion channels	1P-0468~0499	2P-0392~0417	
3   G proteins and signaling proteins   1P-0500~0535   2P-0437~0457   3P-0419~0451     4	2)	Nuclear receptors		2P-0418~0436	
4)         Protein kinases and phosphatases         2P-0458~0476         3P-0452~0471           5)         Stress response and redox response         1P-0536~0589         2P-0477~0516         3P-0472~0521           6)         Others         1P-0590~0617         2P-0517~0529           1)         Genome, chromosome, structure and functions of the nucleus         1P-0619~0639         2P-0530~0549         3P-0522~0541           2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0579~0618           4)         Transcriptional regulation         1P-0730~0758         2P-0619~0652         3P-0619~0651           5)         RNA processing, transport and translation, non-coding RNAs         1P-0759~0814         2P-0653~0702         3P-0652~0701           6)         Others         3P-0702~0732         3P-0702~0732         3P-0702~0732           1)         Germ cells and fertilization         1P-0815~0839         2P-0703~0722         3P-0733~0752           2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932		· · · · · · · · · · · · · · · · · · ·	1P-0500~0535		3P-0419~0451
5)         Stress response and redox response         1P-0536~0589         2P-0477~0516         3P-0472~0521           6)         Others         1P-0590~0617         2P-0517~0529           1)         Genome, chromosome, structure and functions of the nucleus         1P-0619~0639         2P-0530~0549         3P-0522~0541           2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0579~0618           4)         Transcriptional regulation         1P-0730~0758         2P-0619~0652         3P-0652~0701           5)         RNA processing, transport and translation, non-coding RNAs         1P-0759~0814         2P-0653~0702         3P-0652~0701           6)         Others         3P-0702~0732           1)         Germ cells and fertilization         1P-0815~0839         2P-0703~0722         3P-0733~0752           2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866	- 4		5555 5565		00 0450 0474
6)       Others       1P-0590~0617       2P-0517~0529         1)       Genome, chromosome, structure and functions of the nucleus       1P-0619~0639       2P-0530~0549       3P-0522~0541         2)       Chromatin and epigenetics       1P-0640~0682       2P-0550~0579       3P-0542~0578         3)       DNA replication, DNA recombination, DNA mutation and repair       1P-0683~0729       2P-0580~0618       3P-0579~0618         4)       Transcriptional regulation       1P-0730~0758       2P-0619~0652       3P-0652~0701         5)       RNA processing, transport and translation, non-coding RNAs       1P-0759~0814       2P-0653~0702       3P-0652~0701         6)       Others       3P-0702~0732         1)       Germ cells and fertilization       1P-0815~0839       2P-0703~0722       3P-0733~0752         2)       Embryogenesis, organogenesis, morphogenesis       1P-0840~0889       2P-0723~0769       3P-0753~0799         3)       Stem cells and cell differentiation       1P-0890~0932       2P-0770~0809       3P-0800~0839         4)       Developmental engineering and regenerative medicine       3P-0840~0866			1P-0536~0590		
1) Genome, chromosome, structure and functions of the nucleus       1P-0619~0639       2P-0530~0549       3P-0522~0541         2) Chromatin and epigenetics       1P-0640~0682       2P-0550~0579       3P-0542~0578         3) DNA replication, DNA recombination, DNA mutation and repair       1P-0683~0729       2P-0580~0618       3P-0579~0618         4) Transcriptional regulation       1P-0730~0758       2P-0619~0652       3P-0619~0651         5) RNA processing, transport and translation, non-coding RNAs       1P-0759~0814       2P-0653~0702       3P-0652~0701         6) Others       3P-0702~0732         1) Germ cells and fertilization       1P-0815~0839       2P-0703~0722       3P-0733~0752         2) Embryogenesis, organogenesis, morphogenesis       1P-0840~0889       2P-0723~0769       3P-0753~0799         3) Stem cells and cell differentiation       1P-0890~0932       2P-0770~0809       3P-0800~0839         4) Developmental engineering and regenerative medicine       3P-0840~0866		· · · · · · · · · · · · · · · · · · ·			01 0472° - 0021
2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0579~0618           4)         Transcriptional regulation         1P-0730~0758         2P-0619~0652         3P-0619~0651           5)         RNA processing, transport and translation, non-coding RNAs         1P-0759~0814         2P-0653~0702         3P-0652~0701           6)         Others         3P-0702~0732           1)         Germ cells and fertilization         1P-0815~0839         2P-0703~0722         3P-0733~0752           2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866	0)	Ouners	11-0090~0017	ZF-001/~00Z9	
2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0579~0618           4)         Transcriptional regulation         1P-0730~0758         2P-0619~0652         3P-0619~0651           5)         RNA processing, transport and translation, non-coding RNAs         1P-0759~0814         2P-0653~0702         3P-0652~0701           6)         Others         3P-0702~0732           1)         Germ cells and fertilization         1P-0815~0839         2P-0703~0722         3P-0733~0752           2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866					
2)         Chromatin and epigenetics         1P-0640~0682         2P-0550~0579         3P-0542~0578           3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683~0729         2P-0580~0618         3P-0579~0618           4)         Transcriptional regulation         1P-0730~0758         2P-0619~0652         3P-0619~0651           5)         RNA processing, transport and translation, non-coding RNAs         1P-0759~0814         2P-0653~0702         3P-0652~0701           6)         Others         3P-0702~0732           1)         Germ cells and fertilization         1P-0815~0839         2P-0703~0722         3P-0733~0752           2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866	1)	Genome, chromosome, structure and functions of the nucleus	1P-0619~0639	2P-0530~0549	3P-0522~0541
3)         DNA replication, DNA recombination, DNA mutation and repair         1P-0683 ~ 0729         2P-0580 ~ 0618         3P-0579 ~ 0618           4)         Transcriptional regulation         1P-0730 ~ 0758         2P-0619 ~ 0652         3P-0619 ~ 0651           5)         RNA processing, transport and translation, non-coding RNAs         1P-0759 ~ 0814         2P-0653 ~ 0702         3P-0652 ~ 0701           6)         Others         3P-0702 ~ 0732           1)         Germ cells and fertilization         1P-0815 ~ 0839         2P-0703 ~ 0722         3P-0733 ~ 0752           2)         Embryogenesis, organogenesis, morphogenesis         1P-0840 ~ 0889         2P-0723 ~ 0769         3P-0753 ~ 0799           3)         Stem cells and cell differentiation         1P-0890 ~ 0932         2P-0770 ~ 0809         3P-0800 ~ 0839           4)         Developmental engineering and regenerative medicine         3P-0840 ~ 0866					
4) Transcriptional regulation         1P-0730~0758         2P-0619~0652         3P-0619~0651           5) RNA processing, transport and translation, non-coding RNAs         1P-0759~0814         2P-0653~0702         3P-0652~0701           6) Others         3P-0702~0732           1) Germ cells and fertilization         1P-0815~0839         2P-0703~0722         3P-0733~0752           2) Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3) Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4) Developmental engineering and regenerative medicine         3P-0840~0866					
5)         RNA processing, transport and translation, non-coding RNAs         1P-0759~0814         2P-0653~0702         3P-0652~0701           6)         Others         3P-0702~0732           1)         Germ cells and fertilization         1P-0815~0839         2P-0703~0722         3P-0733~0752           2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866					
6) Others       3P-0702~0732         1) Germ cells and fertilization       1P-0815~0839       2P-0703~0722       3P-0733~0752         2) Embryogenesis, organogenesis, morphogenesis       1P-0840~0889       2P-0723~0769       3P-0753~0799         3) Stem cells and cell differentiation       1P-0890~0932       2P-0770~0809       3P-0800~0839         4) Developmental engineering and regenerative medicine       3P-0840~0866	_	·			
1) Germ cells and fertilization       1P-0815~0839       2P-0703~0722       3P-0733~0752         2) Embryogenesis, organogenesis, morphogenesis       1P-0840~0889       2P-0723~0769       3P-0753~0799         3) Stem cells and cell differentiation       1P-0890~0932       2P-0770~0809       3P-0800~0839         4) Developmental engineering and regenerative medicine       3P-0840~0866			15-0/09~0814	∠r-0003∼070Z	
2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866	6)	Uthers			3P-0702~0732
2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866					
2)         Embryogenesis, organogenesis, morphogenesis         1P-0840~0889         2P-0723~0769         3P-0753~0799           3)         Stem cells and cell differentiation         1P-0890~0932         2P-0770~0809         3P-0800~0839           4)         Developmental engineering and regenerative medicine         3P-0840~0866	1)	Germ cells and fertilization	1P-0815~0839	2P-0703~0722	3P-0733~0752
3) Stem cells and cell differentiation 1P-0890~0932 2P-0770~0809 3P-0800~0839 4) Developmental engineering and regenerative medicine 3P-0840~0866					
4) Developmental engineering and regenerative medicine 3P-0840~0866					
			11-0090-0932	Zr =0770~0009	
■ 5) JUthers I I 3P-086/~0888					
	5)	Uthers			3r-U8b/∼U888

	Day 1	Day 2	Day 3
Categories	Dec. 6 (Wed)	Dec. 7 (Thu)	Dec. 8 (Fri)
	Dec. o (vvea)	Dec. 7 (Tild)	Dec. 6 (111)
1) Cancer	1P-0933~1050	2P-0810~0917	3P-0889~0995
Immunity and immune diseases	1P-1051~1098	2P-0918~0952	3P-0996~1030
3) Infectious diseases	1P-1099~1120	2P-0953~0972	3P-1031~1050
4) Metabolic diseases, metabolic syndrome, metabolomics, aging	1P-1121~1181	2P-0973~1050	3P-1051~1085
5) Brain, nervous system, mental disorders	1P-1182 <b>~</b> 1230	2P-1051∼1086	3P−1086~1120
6) Hereditary disorders	1P-1231 <b>~</b> 1247	2P-1087~1103	3P-1121∼1136
7) Diagnosis, xenobiotic metabolism, toxicology		2P-1104~1125	3P−1137~1156
8) Others		2P-1126~1144	3P−1157~1171
Development and differentiation of nervous system	1P-1248∼1267	2P-1145~1159	3P-1172∼1186
Synaptic transmission and plasticity, memory, learning, behavior	1P-1268~1303	2P-1160~1179	3P-1187~1201
Sensory system, biological clock, photoperiodism		2P-1180~1192	3P-1202~1214
4) Others		2P-1193~1212	3P-1215~1229
,,			
Plant cells, organelles, organogenesis			3P-1230∼1242
Plant genome and genes, omics analyses		2P-1213~1225	3P-1243~1255
Phartic genome and genes, offics analyses     Photosynthesis, environmental responses, plant pathogenic microorganisms		2P-1213~1223 2P-1226~1241	3P-1256~1271
-,		ZF-1220~1241	3P-1272~1277
Plant hormones and signal transduction     Agrobiology and food science		2P-1242~1275	3P-1278~1307
6) Others		2P-1276~1293	31-1270-1307
0) Others		21-1270.01293	
1) Bioinformatics		2P-1294~1312	3P-1308~1325
Systems biology and synthetic biology		2P-1313~1327	3P-1326~1340
Molecular evolution and taxonomy		2P-1328~1340	3P-1341~1353
4) Omics analysis technologies (genomics, proteomics, metabolomics)		2P-1341~1359	3P-1354~1371
5) Genetic engineering, nucleic acid engineering, genome editing	1P-1304~1343	2P-1360~1389	3P-1372~1391
6) Protein engineering, antibody engineering, cell engineering	1P-1344~1401	2P-1390~1421	3P-1392~1416
7) Chemical biology		2P-1422~1444	3P-1417~1436
Bioimaging and biosensors	1P-1402~1426	2P-1445~1462	3P-1437~1452
9) Others	1P-1427 <b>~</b> 1464		3P-1453 <b>~</b> 1464
1) Others		2P-1463~1464	

#### **Information for Participants**

#### 1. Registration

#### Registration

#### [For those who have completed Advance Registration by October 16]

Residents in Japan who have already completed advance registration with a full payment of registration fee by the due date will receive a name badge by post in mid-November, thus you do not need to stop by at the Registration Desk. Please be sure to wear your name badge when entering the meeting site. Overseas residents who have already completed advance registration with a full payment should go first to the Registration Desk 1 to pick up your name badge.

[For Late / On-site Registrants (including those who failed to pay advance registration fee by the due date)]

All participants including On-site Registrants are required to register online.

Please access the system for Late/On-site Registration and complete registration first. Then, you need to show a barcode which is printed on a "Registration Confirmatio Sheet" or displayed on your device at the registration desk below.

After receiving the payment of registration fee, our staff will issue your name badge by scanning the barcode.

#### Registration Desks

	Location	Open Hours	Details
Registration Desk 1	Foyer, 1F, No. 2 Building, Kobe International Exhibition Hall	Dec. 6 - 8 8:00 -17:00 *Closed on Dec. 9	Late Registration On-site Registration General Information JBS/MBSJ Desk Accommodation, etc
Registration Desk 2	Foyer, B1F, Main Building, Portopia Hotel	Dec. 6 - 8 8:00 -18:00  Dec. 9 8:00 -17:00  *Credit cards are NOT accepted at Registration Desk 2.	Dec. 6 – 8: Late Registration On-site Registration  Dec. 9: On-site Registration General Information JBS/MBSJ Desk

Kobe International Exhibition Hall opens at 8:00 am.

Please note that you will not be allowed entry prior to the opening time.

#### **♦** Late Registration / On-site Registration Fees

Category	Late Registration/ On-site Registration	Lectures on Demand
Members JBS, MBSJ, FAOBMB, Participating Communities	JPY 13,000 (untaxed)	Available
Student Members (Graduate & Undergraduate Students) JBS, MBSJ, FAOBMB, Participating Communities	JPY 5,000 (untaxed)	(included in registration fees)
Non-members	JPY 22,000 (tax included)	Not Available
Student Non-members (Graduate & Undergraduate Students)	JPY 7,000 (tax included)	not Avallable

#### ◆ Membership Application and Payment (JBS/MBSJ Desk)

The payment for JBS/MBSJ annual membership fee can be made at JBS/MBSJ Desk. Membership application is also available.

Date	Location
Dec.6 - 8	Next to Registration Desk 1 (Foyer, 1F, Hall No. 2 Building, Kobe International Exhibition Hall)
Dec. 9	Next to Registration Desk 2 (Foyer, B1F, Main Building, Portopia Hotel)

#### JBS admission (period: Apr. 1, 2017 - Mar. 31, 2018)

Type of Membership	Annual membership fee	Note
Regular Membership	JPY 7,500	JBS members can access to the online
Student Membership	JPY 3,000	version of "The Journal of Biochemistry" for free.  Members can also purchase a copy of the printed version of the journal at the member's rate.

#### MBSJ admission (period: Oct. 1, 2017 - Sep. 30, 2018)

Type of Membership	Admission fee	Annual membership fee
Regular Membership	JPY 1,000	JPY 6,500
Student Membership	JPY 1,000	JPY 3,000

#### 2. Online Program Search & Abstract Browsing System / App

#### ◆ How to access and login program search and online abstract browsing system

Please access the program search and online abstract browsing system via ConBio2017 website.

http://www.aeplan.co.jp/conbio2017/

\*Available from November 15th (Wed), 2017 to April 2 (Mon), 2018.

#### [For those who have completed Advance Registration by October 16]

By logging in the system, you can browse / download the abstracts and also make your own customized "My schedule".

ID: your registration number

PW: sent by email / printed on your name badge

**[For Late / On-site Registrants** (including those who failed to pay advance registration fee by the due date)]

You can search and view the programs without logging in, but CANNOT browse or download the abstracts.

Please receive your ID and PW to access the abstracts at the registration desk after the payment of registration fee.

Those who will not attend the meeting but want to purchase an ID and PW, please contact the secretariat at <conbio2017@aeplan.co.jp>.

#### ◆ How to install Program Search and Abstract Browsing App

Free to download from App Store or Google Play.

OS: iOS 6 or later (iPhone, iPad, iPad touch), Android 4 or later

App name: ConBio2017 Search word: conbio2017

#### Use of the system/app at the meeting site

Most of the functions of the app work offline.

Wireless internet access is available at the rest area in the poster & exhibition hall. (see page 18 – 21 for wireless network area)

#### 3. Luncheon Seminar

Lunch tickets will be distributed as follows:

When you receive a ticket, our staff will scan a barcode on your name badge. Please note that the information (name, affiliation, job title, and e-mail address) of participants who attended luncheon seminars will be disclosed to the hosting companies.

Ticket Booth for Luncheon Seminar: Foyer, 1F, Hall No. 2 Building,
Kobe International Exhibition Hall

Distribution Time: 8:00 - 10:30 \*close as all the tickets are distributed

#### **◆** Attention

Lunch tickets are invalid after the starting time of the seminars, 11:45. Lunch ticket holders should receive a lunch box at the seminar room by then. Please be aware that if you are late, lunch will be provided to those who are attending the seminar without a lunch ticket.

#### ◆ Attending Luncheon Seminars after the ticket distribution

Please come to each seminar room directly. Please note that there will be no lunch provided in this case. (Lunch will be provided if there is any left.) When you enter a seminar room, our staff will scan the barcode on your name badge. The information (name, affiliation, job title, and e-mail address) of participants who attended luncheon seminars will be disclosed to the hosting companies.

#### ◆ Commercial Exhibition – Exhibition of Instruments , Reagents, Publications

Exhibitions of instruments, reagents, and publications will be held at the Exhibition Hall with numbers of interesting booths. Please complete the registration procedure even if you want to attend only the exhibition.

Date & Time: Dec 6-8 10:00 - 17:00

Place: No.1, 2 & 3 Building, Kobe International Exhibition Hall

#### 4. Services & Facilities

#### Snacks • Drinks

Drinks are available at each Poster & Exhibition Hall.

Snacks are available in front of the entrance of No. 1 Building, Kobe International Exhibition Hall.

#### **◆** Paging service • Bulletin board

No paging service is available to call an individual except for an emergency. Please use a bulletin board in front of the registration desk in order to communicate with the other participants.

#### **◆**Cloaks

Cloaks are open as follows. No valuables or computers can be checked in to the cloak since the meeting does not hold any responsibility for loss or damage of your belongings.

Location	Open Hours
1F & B1F, Main Building, Portopia Hotel	Dec.6-9 8:00-19:00
1F, No. 2 Building,	Dec. 6–8 8:00-19:00
Kobe International Exhibition Hall	*Closed on Dec. 9
B1F, Kobe International Conference	Dec. 9 8:00-18:00
Center	*Open on ONLY Dec. 9

#### Internet

Wireless internet access is available at the rest area in Poster & Exhibition Hall (No. 1, 2, and 3 Building, Kobe International Exhibition Hall) for your use of own devices.

#### **◆** Travel Desk

Travel Desk by Nippon Travel Agency is located near Registration Desk 1 (Foyer, 1F, Hall No. 2 Building, Kobe International Exhibition Hall) to help you to find accommodations and transportations.

#### **♦** Parking

Parking is available as follows. Participants are encouraged to use public transportation due to the limited number of the parking lots.

Parking	Open Hours	Parking Fee	Capacity
East Temporary Parking Space	7:00-22:00	JPY 700 / day	194 cars
West Temporary Parking Space	7:00-22:00	JPY 700 / day	250cars
South Temporary Parking Space	7:00-22:00	JPY 700 / day	496cars
Port Island Sewage Farm Rooftop Parking	24hours	JPY 100 / hour	259cars
Kobe International Exhibition Hall Underground Parking	7:00-22:00	JPY 300 for the first 2 hours JPY 450 for the first 3 hours JPY 600 for the first 4 hours JPY 750 for over 4 hours	200cars
Shimin-Hiroba Underground Parking	7:30-22:00	JPY 150/ hour	186cars

#### **◆** ATM

There are banks, post office and ATM around the conference venue. Please refer to the area map on page 14.

#### ◆ Business Center (courier, copy, fax)

The business center is located in the office on 2F of Kobe International Conference Center. Copy and Fax service is provided with a charge. Courier service (Yamato Transport) is also provided.

#### **◆** Convenience Store

There are convenience stores (LAWSON, Family Mart), supermarket (Daiei) around the conference venue. Please refer to the area map on page 14.

#### 5. Prohibitions

#### ◆ Photography • Recording

No photography and recording with a camera, video, cellphone or any device is allowed at the meeting site.

#### **♦** Cellphone use

Talking on a cellphone in lecture/presentation rooms is not accepted. Please set your cellphone on the silent mode and make sure it will not make a noise during lectures/presentations.

#### Smoking

Smoking is prohibited in all area except for some designated smoking area.

Build	dina	Floor	Room	Venue	9:00 10:00 11:00 12:00 13:00	
Danie		11001	Kairaku 1	9:00 Room 1	[1AW01] How to maintain the database that works? 11:301 [1LS01] KLV CO, LTD.	
			Kairaku 2	Room 2	[1AW02] Launching an RNA physiology with interdisciplinary approaches —An attempt to elucidate molecular mechanisms in functions of long noncoding RNAs—	
			Kairaku 3	Room 3	[1AW03] Transcriptional and epigenetic regulation in characteristic determination of adipocyte LOD	
	Main E	В	Waraku	Room 4	[1AS04] Impact of modern protistology and parasitology on cutting edge science LOD   LTD. LTD.	
	Main Building	F F	Kikusui	Room 5	[1AW05] Frontiers in protein dynamics science by X-ray free electron lasers LOD 1/13	
Kobe Portopia Hotel			Kitano	Room 6	[1AW06] Various functions of transglutaminase gene family from microorganisms to humans	
opia Hot			Nunobiki	Room 7	[1AW07] The surge of TOR research LOD 1/13	
<u>e</u>			Ikuta	Room 8	[1AW08] Towards innovation and understanding of biological phenomena by quantum sensor LOD 1	
			Topaz	Room 9	I 1AW09] Insect dub formal version in Con8lo for insect geeks 4: next approaches to entomology from not only molecular aspect but also morphology and biological phenomena LODI I	
	South Wing	B	Ruby	Room 10	[1AW10] The Dawn of Giant Virus Biology LOD 1/13	
	Wing	F F	Diamond	Room 11	FAOBMB Education Symposium E	
				Emerald	Room 12	9:30 JST Satellite Symposium
	1 F		Main Hall	Room 13	10:30 [PL01] LOD [ ] 11:25 Tadatsug 9:00 [ Taniguchi	
2	5	3 F	International Conference Room	Room 14	[1AS14] New era of organelle biology	
2	Kobe International Conference Center		Reception Hall	Room 15	[1AW15] Transcription and cellular functions regulated by cytoskeleton: cellular phenotypic modulation and deseases	
diona		4 F	401+402	Room 16	[1AW16] New aspects of biology: functions, biogenesis, homeostasis, and diseases	
			501	Room 17	[1AW17] Integrated Muscle Biology LOD 1/18	
Cer Certific	Cant	5 F	502	Room 18	[1AW18] Decoding of organelle zone responsible for cellar function (LOD) []	
<u> </u>	2	F	504+505	Room 19	【1AW19】Zinc signaling in cellular proliferation, differentiation, and death	
			503 Lobby	Special Venue	9:00	
Kob		2 F	2A	Room 20	【1AW20】Biology for overcoming intractable diseases: From reproduction to childhood	
Kobe International Exhibi	No.2 Bldg	F	2B	Room 21	[1AW21] Understanding of molecular pathogenesis of developmental disoders approaching from disease model animals	
ational E	3ldg.	3 F	3A	Room 22	[1AS22] New aspect of phospholipid dynamics of cell membrane: lipids regulate the fundamental cell functions	
xhibition		F	3B	Room 23	[1AW23] End malaria - Twards malaria elimination  [DD] []  12:45	
ition Hall		No.1 Bld No.2 B	g. 1F/2F Ida 1F	Poster Hall 1-1, 1-2, 2, 3	10:00 Poster Exhibition	
	No.3 E		ldg. 1F	Exhibition Hall 1-1, 2, 3	9:00 Exhibition of Insturments, Reagents & Publications	
Con	_		Hall A	Room 24	[1AW24] Novel insights of glial pathophysiology in the brain dysorders	
nmerce a	:obe Cha	3 F	Hall B	Room 25	[1AW25] Origin and evolution of the genetic code "Magic 20"	
Commerce and Industry	amber of	F	Meeting Room1+2	Room 26	[1AT26] Glycobiology and Lipid Biology	
stry	ıstry		Meeting Room 3	Room 27	[1AW27] Glycosylation and CNS disorders stemming from peripheral dysfunctions	

	14:00 15:00	6:00	20:00
		[1PW01] New inghts of biological phenomena revealed by cryoEM	
	[Session Numbers]		
	Date + AM/PM (A / P) +	[1PW02] RNA regulation providing complexity of gene expression system in eukaryotes LOD J/E	
	Symposium (S) /Workshop (W) + Room No.		
	ex) 2AS13:	[1PW03] Causes and consequences of DNA replication stress	
	Day 2 • AM • Symposium • Room13		
	[Language]	[1PS04] What 's going on in Bacteriology? - From a perspective of bacterial pathology, physiology, and	
	Japanese E English J/E Japanese and	molecular biology- LOD	20:15
	English	[1PW05] Measuring, examining, understanding of	
	(depending on	the neurological basis for individuality by means of multidisciplinary approaches  LOD J/E  Daiichi Sankyo Company,	Ltd.
	speakers)	[1PW06] Molecular Science for Dynamics of	
	[Lecture on Demand]	Biometal - Road to "Biometal Science" LOD J	
	LOD " Lecture on Demand" available :	[1PW07] Opening up a new window on signal	
	(Some lectures may be unavailable depending	transduction research by advanced interdisciplinary	
	on each speaker's request.)	alliances LOD D/E	
		[1PW08] A new era of hybrid-science - integration of life and data sciences	
	Plenary Lectures  Workshop	life and data sciences	
	Symposium Workshop Talk Poster	[1PW09] Molecular Biology of Intriguing Creatures	
	Forum FAOBMB programs	LOD (I)	
	JBS/MSBJ programs Luncheon	[1PW10] Hormone research opens up the future of	
		agriculture and food practice!	
		[1PT11] Enzymes, Redox, Bioenergetics	
		17:35	
		16:00 17:10 18:05	
		[1PL02] LOD [] [1PL03] LOD [] Tasuku Honjo Shinya Yamanaka	
		[1PS14] Thiol and sulfide-mediated redox signaling and bioenergetics	
		18:45	20:15
		【1PW15】Organelle siginaling harmonizing cellular Lectures by	
		functions FAOBMB Travel Fellow	
		[1PW16] What we know and what we do not know diversity of the cells, organ	
		about cell competition and its functional mainten	
		[1PW17] Actin Takes Center Stage in Mechano- MBSJ Forums on Resea	rch
		Signaling LOD J Ethics	LOD
		[1PW18] Enzymatic biofuel cell generating electricity [1F18] Are "Young researchers' society	es" necessary?
		by mimicking our energy metabolism - To applicate life science to industries - LOD  los of young researchers in academi	
		[1E10] Next-generation of	
		evolution and disease	Messages
		from and for young resear	chers-
		16:00	
		[1PW20] Scientific Studies on Acyclic Retinoid, Chemopreventive Drug for Hepatocarcinoma	
		LOD []	
		[1PW21] Redifinition of vascular dementia LOD [5]	
		TH WZ17 Redimindorror vascular dementia	
		[4DC22] Leave to be used the decision	
		[1PS22] Impacts beyond the deciplines	
		[1PW23] Novel strategy of creation of neo-lectin	
12	15 15 45	molecules for cellular targeting by novel scaffolds and nano-materials	
Exhibitio	.15	Poster Exhibition Remail 19:00	
Visit	- 1 Oster Discussion	17:00	
VISIL		18:45	20:15
VISIL		[1FW24] Lipid biology in reproduction LOD	unctions
VISIL		TALE VYZ + A LIDIG DIGIOGY IN REDIOGUCION LOD FILL OF CINA Observed by	
VISIL	<u> </u>	cryo-electron microsco	ру
VISIL		cryo-electron microsco	ру
VISIC		[1PW25] Neurobiology of developmental psychiatric	
VISIC		[1PW25] Neurobiology of developmental psychiatric disorders 18:45	20:15
VISIC		[1PW25] Neurobiology of developmental psychiatric	20:15
VISIC		[1PW25] Neurobiology of developmental psychiatric disorders [18736] Chycobiology and Lipid Piology III [18736]	20:15

4

December 6 (Wed.) Day 1

Dil.	alia a	Floor	Do one	1/22.12	9:00 10:00 11:00 12:00 13:00	
Build	lding	Floor	Room	Venue	[2AS01] Molecular higlogy on radiation-induced 11:45 [2LS01] 12:45	
			Kairaku 1	Room 1	carcinogenesis LOD J/E CORPORATION	
					Kairaku 2	Room 2
			Kairaku 3	Room 3	[2LS03] Nuclear Receptors Biology LOD J Wake Pure Chemical Industries, Ltd.	
	Main Building	B 1	Waraku	Room 4	【2AS04】 Microorganisms creating biosphere on the earth: their novel ecology and functions	
~	uilding	Ė	Kikusui	Room 5	[2AW05] (Quantum Physics + Biochemistry) x Biology = ? ~What is "Quantum Biology"~ LOD J/E	
obe Port			Kitano	Room 6	[2AW06] The liquid biopsy test seeks for next generation molecular technologies [LOD ]]	
Kobe Portopia Hote			Nunobiki	Room 7	[2AW07] The Molecular Basis of Calcium signaling and its Application for Therapeutic Strategies Revealed by Multi- disciplinary and Innovative Technologies LOD ]	
<u>e</u>			Ikuta	Room 8	[2AW08] Exposome: regulation and responses to oxidative and environmental stresses	
			Topaz	Room 9	[2AS09] Central circuits for homeostasis: the core mechanism of vital functions LOD []	
	South	В	Ruby	Room 10	[2AW10] Novel cardiac development to accumulate base knowledge for regeneration of myocardium	
	South Wing	1 F	Diamond	Room 11	FAOBMB Award Lectures / FEBS Lecture E	
			Emerald	Room 12	[2AT12] Cellular Response	
		1 F	Main Hall	Room 13	[2PL01] LOD J 11:25 Mitsuhiro 9:00 Yanagida 11:45 12:45	
2	5	3 F	International Conference Room	Room 14	[2AS14] Single-cell analysis leads to new insights in pharmacology	
1	5 5 5 7 8		Reception Hall	Room 15	[2AW15] What are the extracellular vesicles telling us about the story of the human body?	
9	000	4 F	401+402	Room 16	[2AW16] How do living creatures manage a chance to determine themselves?	
Modelli Kelliatio Ilai Colliele Il Ke Celike	Confere		501	Room 17	[2AW17] The Mechanobiology: Towards Comprehensive Understanding of Mechano-Sensing at Molecular, Cellular and Organismal Levels Loop	
		5	502	Room 18	[2AW18] Recapitulating cellular reactions in a test tube —Frontiers of in vitro reconstitution studies—  LOD J/E BEX CO.,LTD.	
1 1	F	F	5 F	504+505	Room 19	[2AW19] New aspects of proteostasis regulation and diseases
			503 Lobby	Special Venue	9:00	
		2	2A	Room 20	[2AW20] Novel strategies toward understanding mechanisms that lead to refractory cancer	
oe Interr	No.2	2 F	2B	Room 21	[2AW21] Focusing to the perivascular cells -from basic science to applied science-	
Kobe International Exhibition Hal	No.2 Bldg.	3	3A	Room 22	[2AS22] Regulation of differentiation of immune cells by transcription factors and epigenetic modification, and their relationship to diseases LOD []	
Exhibition		F	3B	Room 23	[2AW23] The Hormesis NeoBiology LOD ]	
Hall		No.1 Bld		Poster Hall 1-1, 1-2, 2, 3	10:00 Poster Exhibition	
-	No.2 No.3		ldg. 1F ldg. 1F	Exhibition Hall 1-1, 2, 3	9:00 Exhibition of Insturments, Reagents & Publications	
0			Hall A	Room 24	[2AW24] Networks of molecules and cells that generate momory	
Commerce and Industry	Kobe Ch	3	Hall B	Room 25	[2AW25] Emerging aspects of skeletal muscle as a metabolic and endocrine tissue	
and Indu	amber o	3 F	Meeting Room1+2	Room 26	[2AT26] Biology of Diseases	
ıstry			Meeting Room 3	Room 27	[2AW27] Glycobiology Innovation through Chemistry Views	

: 00 14:00 15:00	16:	00 17:00 18:00	19:00 20:00
	16:00	[2PW01] The designer RNAs : controling the gene circuits based on the regulation of RNA-protein	
[Session Numbers] Date + AM/PM (A / P) +		lun-ichi Tomizawa Memorial – Future view from the	MBSJ General Assembly & Tomozawa Fund Award
Symposium (S) /Workshop (W) + Room No.		peginning of molecular biology LOD J/E  [2PW03] Molecular mechanisms of genetic	Ceremony
ex) 2AS13: Day 2 • AM • Symposium • Room13		ecombination for physiological function and echnical application	
[Language]  Japanese E English J/E Japanese and	9	[2PS04] Multi-layer regulation and maintenance of genetic information LOD J/E	
English (depending on		[2PW05] Neon • metabolism ~ unexpected correlation with vital phenomena and energy metabolism	
speakers)  [Lecture on Demand]	1	[2PW06] Unique mechanisms of cell/enzyme functions found in various microorganisms and their application	
(Some lectures may be unavailable appending		[2PW07] Structural biology for understanding cellular functions	
on each speaker's request.)  Plenary Lectures		[2PW08] Are we destined to design and synthesis genomes?	
Symposium Workshop Talk Poster Forum FAOBMB programs	l	[2PW09] Astrobiology: Search for life in the universe and the earth	
JBS/MSBJ programs Luncheon		[2PW10] Morphogen-mediated tissue patterning evisited - Multi-level regulation and its role in issue patterning -	
		[2PW11] Nuclear actin and lamins - deciphering nuclear architecture	
	į.	[2PW12] Understanding of nuclear function by maging and quantitative analysis of chromatin dynamics	
	16:00	[2PL03] LOD J [2PL03] LOD J 17:10 [adamitsu   Shizuo Akira   18:05	
		(2PS14] Minority in life science: An unexpected trick by the action of minor elements that affect the whole system	
		(2PW15] Protein Kinase Signaling System: ntegrative studies of physiological approach and phosphoprotein analysis	
		[2PW16] Nucleome regulation governed by chromatin and non-coding RNA	18:45 20:15
		[2PS17] Structural bioinformatics in relaying basic ife science to drug discovery: practices and subjects	【2F17】Reproducible data analysis using Galaxy
		[2PW18] Membrane transport proteins targeted drug development ~ From molecular mechanisms to ped sides ~	[2F18] Functional network of Japanese researchers to promote science and technology
		[2PW19] Regulatory mechanisms and bioogical unctions of strict post-transrational modification	
	,	6:00 18:30	10:45 20:15
		[2PW20] Seriously, Prevent the Cancer now!	[2F20] Importance of anti-cancer molecular preventive medicine in the 21st century:  Message to scientists of the next generation
	i	[2PW21] Roles of blood/lymphatic vascular systems n health and disease	[2F21] Strategies for Creating NEO- Biomolecules from Unexplored Sequence Spaces by Advanced Technology Developments
		[2PS22] Advances in vector technology innovation owards clinical gene therapy LOD ]	18:45 20:15
13:15 15:45		[2PW23] How to integrate omics research towards oractical systems biology?	[2F23] Living Systems Design Research — Toward designing communication between 18:30 different cells and between layers —
hibition Poster Discussion		Poster Exhibition	Removal 19:00
		17:00	
		[2PW24] Synaptopathy and Axonopathy in Neurodegenerative Disease	
		[2PW25] Updated pathophysiology of uremic toxins on organ crosstalk and homeostasis LOD 1/E	
		[2PT26] Biology of Diseases II	

December 7 (Thur.) Day 2

Build	dina	Floor	Room	Venue	9:00 10:00 11:00 12:00 13:00
Danie	anig	11001	Kairaku 1	9:00 Room 1	[3AS01] New frontiers in protein sciences: From central dogma to diseases [3DD]
			Kairaku 2	Room 2	[3AW02] New genome signatures that orchestrate various chromosome dynamics [3IS02] Robotic Biology Institute Inc.
			Kairaku 3	Room 3	[3AW03] Metabolic central dogma [3LS03] Springer Nature
	Main E	В	Waraku	Room 4	[3AS04] Next Challenges in Developmental Biology - LOD   GORYO Chemical, Inc.
	Main Building	F F	Kikusui	Room 5	[3AW05] New horizon of locomotorium research by molecular biology approaches
obe Port			Kitano	Room 6	[3AW06] Sequence specific external intervention to the structure of the living genome and epigenome
Kobe Portopia Hotel			Nunobiki	Room 7	[3AW07] Operando measurement of reactions on biomembrane by advanced surface science techniques
<u>e</u>			Ikuta	Room 8	[3AW08] Genetics in neural development and function
			Topaz	Room 9	[3AS09] Frontiers in technology for neuroscience LOD [3]
	South Wing	B 1	Ruby	Room 10	[3AW10] Diversity and evolution of sex-determining systems in multicellular animals
	Wing	Ė	Diamond	Room 11	[3AT11] Development and Regeneration
			Emerald	Room 12	[3AT12] Enzymes, Redox, Bioenergetics II
		1 F	Main Hall	Room 13	10:30 【3PLD1】 LOD 【11:25 Shimon Sakaguchi
2	5	3 F	International Conference Room	Room 14	[3AS14] Exciting pathology-Research front of molecular pathology-
26		F	Reception Hall	Room 15	[3AW15] Diversity of cell death and biological responses triggered by dying cells
ational		4 F	401+402	Room 16	[3AW16] DNA Replication to Epigenome Replication and The Between
vone iliterilational colletence center			501	Room 17	[3AW17] Multiomics dissects orchestration of the cells and unravels human development and tumorigenesis [LOD] [7]
Ce Celli		5 F	502	Room 18	[3AT18] Genome and Genetic Information
<u>a</u>		F	504+505	Room 19	[3AW19] Molecular mechanism and physiology of autophagy
			503 Lobby	Special Venue	9:00
Kob		2 F	2A	Room 20	[3AW20] Portrait of p53 Unknown ~New Destinations in p53 Research~
Kobe International Exhibi	No.2 Bldg.	F	2B	Room 21	[3AW21] "Vascular-signpost" of tissue and organ guides its development and regeneration [LOD] [J/E]
ational E	3ldg.	3	3A	Room 22	[3AS22] New perspectives in medical genomics  [LOD []/[]
xhibition		F	3B	Room 23	[3AW23] Innovation of recognition technology of disease-related molecules
ition Hall		No.1 Bld		Poster Hall 1-1, 1-2, 2, 3	Poster Exhibition
-		No.2 Bl No.3 Bl	ag. 1F dg. 1F	Exhibition Hall 1-1, 2, 3	9:00 Exhibition of Insturments, Reagents & Publications
6			Hall A	Room 24	9:00 [3AW24] Molecular biological approach to neurodegenerative disease [10] [7]
Commerce and Industry	Kobe Ch	3	Hall B	Room 25	[3AT25] Biotechnology, Frontier Sciences, Evolution
and Indu	amber o	3 F	Meeting Room1+2	Room 26	[3AT26] Biology of Diseases III
ıstry	-0		Meeting Room 3	Room 27	[3AW27] Exploration of biological phenomena in lipid membranes

13:00 14:00 15:00	16 : I	00 17:00 18:00	1	19:00 20:00
	16:00	[3PS01] Deciphering cancer biology and therapeutic strategy by the cutting-edge OMICS sciences	18:30	
[Session Numbers]		LOD []		
Date + AM/PM (A / P) +		[3PW02] Molecular pathogenesis associated with		
Symposium (S) /Workshop (W) + Room No.		genome instability LOD J/E		
ex) 2AS13:		【3PW03】 Environment-induced epigenomic alterations that cause non-communicable diseases:		
Day 2 • AM • Symposium • Room13		Biological basis of DOHaD LOD J/E		
[1]		【3PT04】Cellular Response II		
[Language]		[SP104] Celiular Response II		
Japanese E English J/E Japanese and English		[3PW05] in situ structural biology for understanding		
(depending on		eukaryotic intracellular protein behaviours LOD J/E		
speakers)				
[Lecture on Demand]		[3PW06] Frontire of reteinal vison science LOD []		
LOD " Lecture on Demand" available :		[3PW07] Canonincal and non-canonical Smad		
(Some lectures may be unavailable depending		signaling pathways		
on each speaker's request.)		[3PW08] Oxygen-mediated gene regulations and		
Plenary Lectures		their roles in diseases		
Symposium Workshop		[append] p discrete a second all second and a		
Talk Poster		【3PS09】 Beyond Imaging: new challenges in cell biology		
FOrum FAOBMB programs  JBS/MSBJ programs Luncheon				
555/M365 programs Euncheon		[3PW10] Molecular Celluar "Size" Biology LOD []		
		【3PT11】Development and Regeneration II		
		【3PT12】Glycobiology and Lipid Biology III		
	16:00	[730] 031 102 61 [7:10		
	?	[3PL02] LOD [] [3PL03] LOD [] [7] Keiji Tanaka Yoshinori Ohsumi 18:05		
		【3PS14】 Life Science Research in Space: Gravitational and Space Radiation Biology		
		and space nadiation blology		18:45 20:15
		【3PW15】Rolls of cell heterogeneity regulating organ development		【3F15】 'Neo'-Vascular Biology: A New Horizon of Vascular Era
		[3PW16] Reconstruction of the nucleus - How		[3F16] How to obtain functional
		much we understand functional structures of the		information for unknown gene
		chromosome and the nucleus? -		detected within the genomic data
		【3PW17】Comprehensive regulation of biological functions orchestrated by endoplasmic reticulum-		Special Forum on Cosortium of
		derived diverse signaling LOD J		Biological Sciences
		[3PT18] Genome and Genetic Information II		
		[3PT19] Cellular Structures and Functions		
		16:00 18:30		18:45 20:15
		[3PW20] Molecular Biology of "Life-Aging-Disease-		[3F20] Exploitation of Biobank resources: Resource distribution from the
		Death"		Tohoku Medical Megabank Organization
		【3PW21】 Effects of environmental factors on human health – Cause allergy or chemical inflammation!?		【3F21】Who do you want that
		LOD J/E		press release to be sent to?
		[3PW22] Toward the understanding of molecular mechanisms for the acquisition and loss of		
		totipotency LOD J/E		
		[3PW23] Elucidation that molecular mechanism of_		
13:15 15:45		neurodegeneration in repeat diseases LOD    LOD	18:30	
		Poster Exhibition	Removal	19:00
Exhibition Poster Discussion				
Evhibition		17:00		
Exhibition Visit Poster Discussion	16:00	18:30		18:45 20:15
Exhibition Visit Poster Discussion	16:00			【3F24】Emerging Impacts of Sphingolipids: Basic Science to
Exhibition Visit Poster Discussion	16:00	[3PW24] Hidden crosstalk between lipids and sugars		[3F24] Emerging Impacts of
Exhibition Visit Poster Discussion	16:00	[3PW24] Hidden crosstalk between lipids and sugars		【3F24】Emerging Impacts of Sphingolipids: Basic Science to
Exhibition Visit Poster Discussion	16:00	18:30  [3PW24] Hidden crosstalk between lipids and sugars		【3F24】Emerging Impacts of Sphingolipids: Basic Science to
Exhibition Visit Poster Discussion	16:00	18:30  [3PW24] Hidden crosstalk between lipids and sugars		【3F24】Emerging Impacts of Sphingolipids: Basic Science to
Exhibition Visit Poster Discussion	16:00	[3PW24] Hidden crosstalk between lipids and sugars [3PW24] Plant Biology, Agrobiology, Food Science		【3F24】Emerging Impacts of Sphingolipids: Basic Science to
Exhibition Visit Poster Discussion	16:00	[3PW24] Hidden crosstalk between lipids and sugars [3PW24] Plant Biology, Agrobiology, Food Science		【3F24】Emerging Impacts of Sphingolipids: Basic Science to

December 8 (Fri.) Day 3

Build	ding	Floor	Room	Venue	9:00 10:00 11:00	12:00 13:00  11:45		
			Kairaku 1	9:00 Room 1	[4AS01] Proteomics: Challenge to the sample complexity	【4LT01】Proteins II		
			Kairaku 2	Room 2	[4AW02] DNA damages and cellular senescence relevant to aging-related disease development and effects of therapeutic treatment LOD []	【4LT02】 Biology of Diseases VI		
	Main B		Kairaku 3	Room 3	[4AW03] Inter-community facilities for Life Sciences and Drug Discovery Process	【4LT03】Proteins III		
		В	Waraku	Room 4	[4AS04] Frontiers of Reproduction Researches -from Molecular and Cellular Dynamics to Agricultural Visions-	JBS & MBSJ Collaboration Seminar on Career Path for Young Researchers LOD		
_	Main Building	1 F	Kikusui	Room 5	[4AT05] Biology of Diseases V	[4F05] AMED Forum ~ Invitation to HFSP International Research Grants ~		
Kobe Portopia Hotel			Kitano	Room 6	[4AW06] Cracking the code for multiple modes of organ/ tissue regeneration and their regulation: From a liver perspective in basic science and clinical applications [LOD]	[4F06] How to become and support next generation global MD scientists		
opia Hot					Nunobiki	Room 7	[4AW07] Re-discovery of cellular changes in response to environmental change LOD J/E	[4F07] National Bioscience Database Center, JST
<u>re</u>			Ikuta	Room 8	[4AW08] Molecular and neural basis for appetite and food preferences	[4LT08] Neuroscience		
				Topaz	Room 9	[4AW09] Molecular Symbiosis - functional emergence via RNA-protein interaction	[4F09] Challenge to uncover the role of mysterious RNAs—Key actors in diverse living systems!	
	South	В	Ruby	Room 10	[4AW10] Gap Junction workshop LOD J/E	【4LT10】 Cellular Response IV		
	South Wing	1 F	Diamond	Room 11	[4AS11] Redox, Energy, Disease LOD [3]	JB Luncheon Workshop		
			Emerald	Room 12	[4AW12] Landscape of respiratory system life science: fusion of molecular, developmental biology and regenerative medicines	【4LT12】Development and Regeneration III		
		1 F	Main Hall	Room 13	[4AW13] Ubiquitin code: most complicated protein modification in the cell	11:45		
2	5 3				International Conference Room	Room 14	[4AS14] Genetics and Epigenetics	[4LT14] Genome and Genetic Information III
	<del>-</del>	3 F	Reception Hall	Room 15	[4AW15] Weaving animal life events by adaptive mechanisms to shifting nutritional environments	【4LT15】 Genome and Genetic Information IV		
Ta COTA		4 F	401+402	Room 16	[4AW16] Frontier research on the genome dynamics of prokaryotic cells	【4LT16】 Genome and Genetic Information V		
COLLEGE	Opfice.		501	Room 17	[4AW17] New Vistas in Biology of Endocytosis: Molecules and Superresolution LOD []	[4LT17] Cellular Structures and Functions III		
- Cel	Kobe International Conference Center	5	5 F	502	Room 18	[4AT18] Cellular Response III	[4LT18] Cellular Structures and Functions IV	
1 6		F	504+505	Room 19	[4AT19] Cellular Structures and Functions II	【4LT19】 Cellular Response V		
			503 Lobby	Special Venue				
Кор		2 F	2A	Room 20				
ж Intern	No.2 Bldg.	F	2B	Room 21				
Kobe International Exhibition Hal	Bldg.	3 F	3A	Room 22				
xhibitior		F	3B	Room 23				
Hall		No.1 Bld No.2 Bl		Poster Hall 1-1, 1-2, 2, 3				
		No.3 Bl	ldg. 1F	Exhibition Hall 1-1, 2, 3	9:00 11:30	11:45		
Con	_		Hall A	Room 24	[4AW24] The metabolic crosstalk at the molecular, cellular and systemic levels that drives non-communicable diseases LOD []	【4LT24】 Biology of Diseases VII		
Commerce and Industry	íobe Cha	3 F	Hall B	Room 25	[4AT25] Proteins	【4LT25】 Proteins IV		
and Indu:	imber of	F	Meeting Room1+2	Room 26	【4AT26】Biotechnology, Frontier Sciences, Evolution II	【4LT26】 Biology of Diseases VIII		
stry			Meeting Room 3	Room 27	【4AT27】Biotechnology, Frontier Sciences, Evolution III	【4LT27】 Biotechnology, Frontier Sciences, Evolution IV		

13:30	14:00 15:00 16:00	17:00	18:00 19:00 20:00
	[4PS01] Chemical biology update		[Session Numbers]
	[4PS02] Course decision of cells LOD J/E		Date + AM/PM (A / P) +
	[4PS03] Advanced experimental methods for structural biology		$ \label{eq:continuous}                                   $
	[4PS04] Meta-tuning of biological timing into the environmental cycles		Day 2 • AM • Symposium • Room13  [Language]
	[4PW05] New stream of disease biomarker studies		Japanese English J/E Japanese and English (depending on
	【4P1T06】Biology of Diseases IX		speakers) [Lecture on Demand]
	[4PW07] Multidisciplinary Approach Reveals Novel Function of GTP Energy and Strategy to Cure Human Diseases LOD 1/5		LOD "Lecture on Demand" available : (Some lectures may be unavailable depending on each speaker's request.)
	[4P1T08] Neuroscience II		Plenary Lectures
	[4PS09] Emerging world of RNA modifications and epitranscriptome		Symposium Workshop Talk Poster Forum FAOBMB programs
	[4PW10] Atypical cellular responses mediated by cell surface proteins		JBS/MSBJ programs Luncheon
	Frontier in biochemistry: Lectures by award winners LOD J		
	[4P1T12] Development and Regeneration IV		
13:30	[4PL] LOD J Akira Endo	16:15 17:45	
	[4PS14] Recent advances and prospects in genome editing technology	[4P2T14] Genome and Genetic Information VII	
	[4PW15] Genome activation of zygote and gamete	[4P2T15] Genome and Genetic Information VIII	
	[4PW16] Elegant strategies of translational control that establish cell identity	[4P2T16] Development and Regeneration V	
	[4P1T17] Cellular Structures and Functions V	[4P2T17] Cellular Structures and Functions VII	
	[4P1T18] Genome and Genetic Information VI	[4P2T18] Genome and Genetic Information IX	
	[4P1T19] Cellular Structures and Functions VI	[4P2T19] Cellular Structures and Functions VIII	
	15:00 Presentation by High So Oral Presentation: 503 Poster Presentation: Lol		
	1 OSCI TESCHAROTI, EVI		
1	13:30 16:00	16:15 17:45	
	【4PW24】Essential Micronutrient "Selenium" in Biology and Medicine- 200 years from Discovery	【4P2T24】Biology of Diseases XI	
	【4P1T25】Proteins V	【4P2T25】 Glycobiology and Lipid Biology IV	
	[4P1T26] Biology of Diseases X	【4P2T26】Biology of Diseases XII	

December 9 (Sat.) Day 4