

## Scientific Programs

### October 23

### Room A

#### 07:30-08:30 Satellite Symposium 1:

#### Optimal antiplatelet therapy for Asian stroke patients

*Chair: Yukito Shinohara (Department of Neurology, Tokai University, Japan)*

07:30-08:30	Optimal antiplatelet therapy for Asian stroke patients	<b>Jong S. Kim</b> ..... 299 (Department of Neurology, University of Ulsan, Korea)
08:30-08:50	Intermission	

#### 08:50-10:30 Symposium 1:

#### What should we do in the new era of endovascular therapy?

*Chairs: Byung-Chul Lee (Department of Neurology, Hallym University, Korea)  
Norihiro Suzuki (Department of Neurology, Keio University, Japan)*

08:50-09:40	Acute care of patients with ischemic stroke	<b>Markku Kaste</b> ..... 35 (Department of Neurology, University of Helsinki, Finland)
09:40-10:05	Past, present and future of endovascular therapy in Korea	<b>Dae Chul Suh</b> ..... 36 (Department of Radiology, University of Ulsan, Korea)
10:05-10:30	Endovascular therapy for acute ischemic stroke in Japan; Past and future	<b>Hiroshi Yamagami</b> ..... 39 (Department of Neurology, National Cerebral and Cardiovascular Center, Japan)
10:30-10:50	Coffee Break	

#### 10:50-12:30 Symposium 2: New mission on stroke prevention

*Chairs: Joung-Ho Rha (Department of Neurology, Inha University, Korea)  
Shinichiro Uchiyama (Clinical Research Center for Medicine, International University of Health and Welfare, Japan)*

10:50-11:15	High-risk groups in patients with established cardioembolic stroke	<b>Ji Hoe Heo</b> ..... 43 (Department of Neurology, Yonsei University, Korea)
11:15-11:40	Chronic kidney disease as an emerging risk factor for stroke	<b>Kazunori Toyoda</b> ..... 44 (Department of Cerebrovascular Medicine and Neurology, National Cerebral and Cardiovascular Center, Japan)
11:40-12:05	Dual antiplatelet therapy for stroke prevention: How can we maximize the efficacy?	<b>Seung-Hoon Lee</b> ..... 45 (Department of Neurology, Seoul National University, Korea)
12:05-12:30	Results and interpretation of J-STARs trial	<b>Masayasu Matsumoto</b> ..... 46 (Department of Neurology, Hiroshima University, Japan)
12:30-12:40	Intermission	

#### 12:40-13:40 Satellite Symposium 2: Is it impossible to completely prevent ischemic stroke?

*Chairs: Beum-Saeng Kim (Department of Neurology, Catholic University of Korea, Korea)  
Chin-Sang Chung (Department of Neurology, Sungkyunkwan University, Korea)*

12:40-13:10	Estimate the risk of ICH to apply longer DAPT to patients with ischemic stroke	<b>Jun Lee</b> ..... 303 (Department of Neurology, Yeungnam University, Korea)
13:10-13:40	Prime time for acute prevention with double antiaggregation and future perspectives beyond current guidelines	<b>Woo-Keun Seo</b> ..... 304 (Department of Neurology, Korea University, Korea)

# Scientific Programs

13:40-13:50 Intermission

## 13:50-15:30 Symposium 3: Our own problem in Japan and Korea: Moyamoya disease - Beyond the present understanding

*Chairs: Jae-Kyu Roh (Department of Neurology, Korean Armed Forces Capital Hospital, Korea)  
Joji Nakagawara (Department of Investigative Radiology, National Cerebral and Cardiovascular Center, Japan)*

13:50-14:15	Genetics of moyamoya disease: Recent study using genetic engineered mice of RNF213; A moyamoya disease susceptibility gene	<b>Miki Fujimura</b> .....49 (Department of Neurosurgery, Tohoku University, Japan)
14:15-14:40	Novel MR diagnosis of moyamoya disease	<b>Satoshi Kuroda</b> .....50 (Department of Neurosurgery, University of Toyama, Japan)
14:40-15:05	Epidemiology in Korea and long-term effect of surgery in moyamoya disease	<b>Chang Wan Oh</b> .....51 (Department of Neurosurgery, Seoul National University, Korea)
15:05-15:30	Isolated MCA disease in young patients: What is this?	<b>Jong S. Kim</b> .....52 (Department of Neurology, University of Ulsan, Korea)
15:30-15:50	Coffee Break	

## 15:50-16:50 Satellite Symposium 4.

*Chairs: Kwang Ho Lee (Department of Neurology, Sungkyunkwan University, Korea)  
Byung-Woo Yoon (Department of Neurology, Seoul National University, Korea)*

15:50-16:10	Recent update of RAS role of ACE 2	<b>Sang-Chol Lee</b> .....313 (Department of Cardiology, Sungkyunkwan University, Korea)
16:10-16:30	Statins for the management of dyslipidemia in acute ischemic stroke	<b>Keun-Sik Hong</b> .....314 (Department of Neurology, Inje University, Korea)
16:30-16:50	Why do we need pioglitazone?	<b>Kyusik Kang</b> .....315 (Department of Neurology, Eulji University, Korea)
16:50-17:00	Intermission	

## 17:00-17:50 Satellite Symposium 5: Beyond statin monotherapy \_MSD

*Chair: Jong S. Kim (Department of Neurology, University of Ulsan, Korea)*

17:00-17:50	Benefit of adding ezetimibe to statin therapy in stroke patients	<b>Hee-Kwon Park</b> .....319 (Department of Neurology, Inha University, Korea)
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17:50-18:00 Intermission

## 18:00-19:00 Poster Presentation 1 (@ Poster Room)

*Chairs: Keun-Hwa Jung (Department of Neurology, Seoul National University, Korea)  
Kyung-Ho Yu (Department of Neurology, Hallym University, Korea)  
Jun Hong Lee (Department of Neurology, NHIC Ilsan Hospital, Korea)  
Jaseong Koo (Department of Neurology, Catholic University of Korea, Korea)  
Sung Bom Pyun (Department of Rehabilitation, Korea University, Korea)  
Jay Chol Choi (Department of Neurology, Jeju National University, Korea)  
Jae-Kwan Cha (Department of Neurology, Dong-A University, Korea)  
Moon-Ku Han (Department of Neurology, Seoul National University, Korea)  
Seul-Ki Jeong (Department of Neurology, Chonbuk National University, Korea)  
Kyung-Yul Lee (Department of Neurology, Yonsei University, Korea)*

19:00-21:00 **Banquet**

## October 23

## Room B

10:50-12:30 **Scientific Session 1.**

*Chairs: Jei Kim (Department of Neurology, Chungnam National University, Korea)  
Keun-Sik Hong (Department of Neurology, Inje University, Korea)*

10:50-11:00	Air pollution with particulate matter is associated with mortality in patients with ischemic stroke	<b>Sang Joon An</b> ..... 55 (Department of Neurology, Seoul National University, Korea)
11:00-11:10	Binge drinking habit can increase risk for ischemic stroke in Korean men	<b>Soo Joo Lee</b> ..... 56 (Department of Neurology, Eulji University, Korea)
11:10-11:20	Effect of B-Vitamins on stroke risk among individuals with vascular disease who are not on antipalletelets: A meta-analysis	<b>Jong-Ho Park</b> ..... 57 (Department of Neurology, Seonam University, Korea)
11:20-11:30	Visceral fat and cerebral microbleeds in neurologically healthy people	<b>Hyung-Min Kwon</b> ..... 58 (Department of Neurology, Boramae Medical Center, Korea)
11:30-11:40	Headache in moyamoya disease - Incidental or characteristic?	<b>Shigeru Nogawa</b> ..... 59 (Department of Neurology, Tokai University, Japan)
11:40-11:50	The relationship between osteoporosis and cerebral artery calcification	<b>Moo-Seok Park</b> ..... 60 (Department of Neurology, Chung-Ang University, Korea)
11:50-12:00	The association between hypertriglyceridemia and acute lacunar infarction in Korean population	<b>Kyung Bok Lee</b> ..... 61 (Department of Neurology, Soonchunhyang University, Korea)
12:00-12:10	Cerebral hemodynamic disturbance in dural arteriovenous fistula with retrograde leptomeningeal venous drainage: A prospective study using 123I-Iodoamphetamine single photon emission computed tomography	<b>Kazuya Kanemaru</b> ..... 62 (Department of Neurosurgery, University of Yamanashi, Japan)
12:10-12:20	Identification and validation of specific genes developing promoter methylation changes in atherosclerotic tissues	<b>Jei Kim</b> ..... 63 (Department of Neurology, Chungnam National University, Korea)
12:20-12:30	Determinants of basal collaterals in moyamoya disease: Clinical and genetic factors	<b>Jong-Won Chung</b> ..... 64 (Department of Neurology, Sungkyunkwan University, Korea)
12:30-12:40	Intermission	

12:40-13:40 **Satellite Symposium 3.**

*Chairs: Byung-Chul Lee (Department of Neurology, Hallym University, Korea)  
Ji Hoe Heo (Department of Neurology, Yonsei University, Korea)*

**Rivaroxaban, simple with confidence in anticoagulation**

12:40-13:00	Fast and furious: New evidence in acute ischemic stroke patients with atrial fibrillation	<b>Sun U. Kwon</b> ..... 307 (Department of Neurology, University of Ulsan, Korea)
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## Scientific Programs

Stroke prevention in non-valvular arterial fibrillation: Improving clinical practice	
13:00-13:20	Navigating the evidence of Apixaban in the real world <b>Kazunori Toyoda</b> ..... 308 (Department of Cerebrovascular Medicine and Neurology, National Cerebral and Cardiovascular Center, Japan)
Role of non-vitamin K Anticoagulants (NOACs) in non-valvular atrial fibrillation – Stroke prevention	
13:20-13:40	Dabigatran for stroke prevention: Maximizing clinical benefits, minimizing risk <b>Vincent Thijs</b> ..... 309 (Head of Stroke Medicine at Austin Health, Australia)
13:40-13:50	Intermission
<b>13:50-15:30</b>	<b>Symposium 4: Current and future concept of stroke care system</b> <i>Chairs: Chin-Sang Chung (Department of Neurology, Sungkyunkwan University, Korea) Kiyohiro Houkin (Department of Neurosurgery, Hokkaido University, Japan)</i>
13:50-14:15	National strategy on stroke care system in Japan <b>Kazuo Minematsu</b> ..... 67 (Department of Cerebrovascular Medicine and Neurology, National Cerebral and Cardiovascular Center, Japan)
14:15-14:40	Development of patient delivery system: Brain saver program in Anyang city <b>Mi Sun Oh</b> ..... 68 (Department of Neurology, Hallym University, Korea)
14:40-15:05	How could multidisciplinary comprehensive stroke care centers in Japan be successful? <b>Kazutoshi Nishiyama</b> ..... 69 (Department of Neurology, Kitasato University School of Medicine, Japan)
15:05-15:30	Clinical research center for stroke (CRCS) project in Korea <b>Byung-Woo Yoon</b> ..... 70 (Department of Neurology, Seoul National University, Korea)

## October 24

## Room A

07:30-08:30	<b>Korean Stroke Society Committee Meeting</b>
08:30-08:50	Intermission
<b>08:50-10:30</b>	<b>Scientific Session 2</b> <i>Chairs: Woo-Suk Choi (Department of Radiology, Kyung Hee University, Korea) Yong-Seok Lee (Department of Neurology, Seoul National University, Korea)</i>
08:50-09:00	Effects of mesenchymal stem cell treatment on the expression of matrix metalloproteinases and angiogenesis during ischemic stroke recovery <b>Hyo Suk Nam</b> ..... 73 (Department of Neurology, Yonsei University, Korea)
09:00-09:10	Anti-inflammatory effects of ceria nanoparticles in experimental intracerebral hemorrhage models <b>Dong-Wan Kang</b> ..... 74 (Department of Neurology, Seoul National University, Korea)
09:10-09:20	Upregulation of a signaling pathway involving transfer RNA after subarachnoid hemorrhage in rats <b>Takashi Sasaki</b> ..... 75 (Department of Neurosurgery, Tohoku University, Japan)
09:20-09:30	Newly diagnosed - Atrial fibrillation after stroke and embolic stroke <b>Yerim Kim</b> ..... 76 (Department of Neurology, Catholic University of Korea, Korea)

09:30-09:40	Proteomics-based identification and real-time PCR array of biomarkers influencing carotid plaque vulnerability	<b>Sung Hyuk Heo</b> ..... 77 (Department of Neurology, Kyung Hee University, Korea)
09:40-09:50	Factors associated with small ruptured intracranial aneurysm	<b>Bum Joon Kim</b> ..... 78 (Department of Neurology, University of Ulsan, Korea)
09:50-10:00	Safety of the stepwise carotid revascularization for the severe stenosis of the ICA	<b>Hirofumi Kazama</b> ..... 79 (Department of Neurosurgery, University of Yamanashi, Japan)
10:00-10:10	Clinical characteristics of ischemic stroke with atrial fibrillation in octogenarians or older patients	<b>Koji Tanaka</b> ..... 80 (Department of Neurology, Kyushu University, Japan)
10:10-10:20	Use of anticoagulation to prevent venous thromboembolism among high- risk patients with acute ischemic stroke: An analysis of the clinical research center for stroke-5th division (CRCS-5) registry	<b>Jay Chol Choi</b> ..... 81 (Department of Neurology, Jeju National University, Korea)
10:20-10:30	Antithrombotics within 24 hours after recanalization treatment: Is it safe?	<b>Beom Joon Kim</b> ..... 82 (Department of Neurology, Seoul National University, Korea)
10:30-10:50	Coffee Break	

**10:50-12:30 Symposium 5: Stroke pathophysiology and translational medicine**

*Chairs: Gyeong-Moon Kim (Department of Neurology, Sungkyunkwan University, Korea)  
Hiroyuki Kinouchi (Department of Neurosurgery, University of Yamanashi, Japan)*

10:50-11:15	Neurovascular protection in stroke	<b>Shunya Takizawa</b> ..... 85 (Department of Neurology, Tokai University School of Medicine, Japan)
11:15-11:40	Biomarker and biomaker in stroke	<b>Oh Young Bang</b> ..... 86 (Department of Neurology, Sungkyunkwan University, Korea)
11:40-12:05	Post-ischemic inflammation: Potential therapeutic target for ischemic stroke	<b>Kazuo Kitagawa</b> ..... 87 (Department of Neurology, Tokyo Women's Medical University, Japan)
12:05-12:30	Quantitative interpretation of white matter hyperintensity to affect stroke outcomes with differential impact and mechanisms depending on stroke subtypes	<b>Dong-Eog Kim</b> ..... 88 (Department of Neurology, Dongguk University, Korea)
12:30-12:40	Intermission	

**12:40-13:40 Poster Presentation 2 (@ Poster Room)**

*Chairs: Hyo Suk Nam (Department of Neurology, Yonsei University, Korea)  
Youngchai Ko (Department of Neurology, Eulji University, Korea)  
Kyung Bok Lee (Department of Neurology, Soonchunhyang University, Korea)  
Mi Sun Oh (Department of Neurology, Hallym University, Korea)  
Sung Hee Hwang (Department of Neurology, Hallym University, Korea)  
Woo-Keun Seo (Department of Neurology, Korea University, Korea)  
Jin Soo Lee (Department of Neurology, Ajou University, Korea)*

# Scientific Programs

October 24

Room B

## 08:50-10:30 Scientific Session 3

*Chairs: Hee-Joon Bae (Department of Neurology, Seoul National University, Korea)  
Chul-Ho Sohn (Department of Radiology, Seoul National University, Korea)*

08:50-09:00	Aneurysms at the origin of anomalous middle cerebral arteries	<b>Yu Iida</b> ..... 91 (Department of Neurosurgery, Yokohama Sakae Kyosai Hospital, Japan)
09:00-09:10	Secular trends of intravenous heparin use for acute ischemic stroke treatment in Korea: Impact of guidelines on clinical practice	<b>Hee-Joon Bae</b> ..... 92 (Department of Neurology, Seoul National University, Korea)
09:10-09:20	Initial urgent care doctor for ischemic stroke or TIA associated with acute type A aortic dissection	<b>Masatoshi Koga</b> ..... 93 (Division of Stroke Care Unit, National Cerebral and Cardiovascular Center, Japan)
09:20-09:30	Endovascular recanalization therapy in acute ischemic stroke: Systematic review and updated meta-analysis of randomized controlled trials	<b>Keun-Sik Hong</b> ..... 94 (Department of Neurology, Inje University, Korea)
09:30-09:40	Usefulness of susceptibility vessel sign with bright vessel appearance in acute ischemic stroke	<b>Seung-Hoon Lee</b> ..... 95 (Department of Neurology, Seoul National University, Korea)
09:40-09:50	Evaluation of carotid atherosclerotic plaque by cone-beam CT	<b>Motohiro Nomura</b> ..... 96 (Department of Neurosurgery, Yokohama Sakae Kyosai Hospital, Japan)
09:50-10:00	Microsurgical interintimal dissection in carotid endarterectomy	<b>Tsutomu Ichinose</b> ..... 97 (Department of Neurosurgery, Yao Tokushukai General Hospital, Japan)
10:00-10:10	High-resolution MRI study after recanalization: Does solitaire hurt arteries?	<b>Woo-Keun Seo</b> ..... 98 (Department of Neurology, Korea University, Korea)
10:10-10:20	Predictive value of thrombus volume for successful recanalization in stroke patients treated with solitaire	<b>Jang-Hyun Baek</b> ..... 99 (Department of Neurology, National Medical Center, Korea)
10:20-10:30	Long-term durability of carotid endarterectomy and carotid artery angioplasty and stenting for symptomatic stenosis: Updated systematic review and meta-analysis	<b>Jin-Man Jung</b> ..... 100 (Department of Neurology, Korea University, Korea)

10:30-10:50 Coffee Break

## 10:50-12:30 Symposium 6: Novel strategy on stroke outcome

*Chairs: Jongmin Lee (Department of Rehabilitation, Konkuk University, Korea)  
Yoshiaki Itoh (Department of Neurology, Osaka City University, Japan)*

10:50-11:15	How useful is imaging in predicting outcomes in rehabilitation of post-stroke aphasia?	<b>Masahiro Abo</b> ..... 103 (Department of Rehabilitation Medicine, The Jikei University, Japan)
11:15-11:40	Stem cell therapy in chronic ischemic stroke patients: Between fact and fantasy	<b>Seong-Ho Koh</b> ..... 104 (Department of Neurology, Hanyang University, Korea)
11:40-12:05	Restoration of post-stroke upper limb paralysis with BMI neurorehabilitation	<b>Meigen Liu</b> ..... 105 (Department of Rehabilitation Medicine, Keio University, Japan)
12:05-12:30	Tele-rehabilitation for stroke	<b>Nam-Jong Paik</b> ..... 106 (Department of Rehabilitation, Seoul National University, Korea)

## Poster Presentation

### Poster Session 1

*Chair: Keun-Hwa Jung (Department of Neurology, Seoul National University, Korea)*

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|-----|---|--|
| 001 | Multifunctional mesoporous nanosilica composed of magnetic core and shell doped ceria nanoparticles for diagnosis and treatment of intracerebral hemorrhage | <b>Dong-Wan Kang</b> ..... 109<br>(Seoul National University, Korea) |
| 002 | The post-translational modifications of neurodegeneration related proteins in the photothrombotic induced cerebral infarct rat model                        | <b>Kyung-Lim Joa</b> ..... 110<br>(Inha University, Korea)           |
| 003 | Protective effects of Fc-tagged recombinant saxatilin in transient focal cerebral ischemia of mice  | <b>Il Kwon</b> ..... 111<br>(Yonsei University, Korea)               |
| 004 | Infarct volume can be reduced by early activation of the phosphatidylinositol 3-kinase pathway in hyperacute stage after ischemic stroke                    | <b>Seong-Ho Koh</b> ..... 112<br>(Hanyang University, Korea)         |
| 005 | Effects of Zileuton on murin models of intracranial hemorrhage  | <b>Han Sang Lee</b> ..... 113<br>(Seoul National University, Korea)  |
| 006 | Activation of the PI3K pathway plays important roles in reduction of cerebral infarction by cilnidipine   | <b>Jeong-woo Son</b> ..... 114<br>(Hanyang University, Korea)        |
| 007 | Neuroprotective effects of acetyl-L-carnitine against oxygen-glucose deprivation-induced neural stem cell death   | <b>Seong-Ho Koh</b> ..... 115<br>(Hanyang University, Korea)         |
| 008 | Tiny hippocampal lesions on diffusion weighted MR in patients with versus without transient global amnesia  | <b>Moonyoung Jeong</b> ..... 116<br>(Konkuk University, Korea)       |
| 009 | Embolic stroke of undetermined source (ESUS) in Korea university stroke registry: Descriptive analyses  | <b>Han Jun Kim</b> ..... 117<br>(Korea University, Korea)            |
| 010 | Resistance index decrement ratio along the M1 segment of middle cerebral artery is associated with progression of cerebral white matter hyperintensities    | <b>Woo-Jin Lee</b> ..... 118<br>(Seoul National University, Korea)   |

### Poster Session 2

*Chair: Kyung-Ho Yu (Department of Neurology, Hallym University, Korea)*

- |     |   |  |
|-----|---|--|
| 011 | The role of vasa vasorum activities in human carotid atherosclerosis is associated with plaque development and vulnerability                        | <b>Sung Pil Joo</b> ..... 119<br>(Chonnam National University, Korea)            |
| 012 | Echoing plaque activity of the coronary and intracranial arteries in stroke patients: Cardiac multidetector CT and high-resolution MR imaging study | <b>Jong-Won Chung</b> ..... 120<br>(Sungkyunkwan University, Korea)              |
| 013 | Feature of pain in the paralyzed limbs at stroke patients and its treatment   | <b>Ziyoda Akbarkhodjaeva</b> ..... 121<br>(Tashkent Medical Academy, Uzbekistan) |
| 014 | Cerebral air embolism caused by interstitial pneumonia with aspergillus infection   | <b>Mutsuko Araki</b> ..... 122<br>(Hiroshima University, Japan)                  |
| 015 | Lack of association between serum uric acid level and short-term clinical outcome in acute ischemic stroke  | <b>Hanna Choi</b> ..... 123<br>(Sungkyunkwan University, Korea)                  |
| 016 | Focal perfusion abnormality in diffusion negative transient ischemic attack predicts subsequent new ischemic lesions                                | <b>Sang Hun Lee</b> ..... 124<br>(University of Ulsan, Korea)                    |
| 017 | Cerebral syncope: A disproportionate cerebral hypoperfusion, as an additional mechanism of syncope  | <b>Hyojung Nam</b> ..... 125<br>(University of Ulsan, Korea)                     |

018	Left atrial myxoma as a cause of ischemic stroke : Case report	<b>Su Hyun Park</b> ..... 126 (Pohang St. Mary's Hospital, Korea)
019	Unusual multifocal infarction in patient with muco-associated lymphoid tissue lymphoma	<b>Jinhyun Kim</b> ..... 127 (Chungbuk National University, Korea)
020	Combined MR diffusion/perfusion imaging patterns define underlying mechanisms of lateral medullary infarction	<b>Younggun Lee</b> ..... 128 (Yonsei University, Korea)

### Poster Session 3

*Chair: Jun Hong Lee (Department of Neurology, NHIC Ilsan Hospital, Korea)*

021	Posterior reversible encephalopathy syndrome secondary to blood transfusion	<b>Siryung Han</b> ..... 129 (Catholic University of Korea, Korea)
022	Difference of autonomic function in acute stroke phase between right and left middle cerebral artery territory	<b>Yoochan Kim</b> ..... 130 (Korea University, Korea)
023	Clinical and physiological characteristics of transient orthostatic hypotension in adults	<b>Dong Gyu Park</b> ..... 131 (Ajou University, Korea)
024	Pontine tegmental infarction with contralateral ataxia, tremor	<b>Min-Ju Cha</b> ..... 132 (Chungbuk National University, Korea)
025	Bilateral thalamic infarction caused by artery of percheron occlusion	<b>Sung Keun Kim</b> ..... 133 (Kangwon National University, Korea)
026	Primary central nervous system vasculitis : Experience of Inha university hospital	<b>Eung-seok Lee</b> ..... 134 (Inha University, Korea)
027	Dangerous hiking at high altitude	<b>Jeonghee Kim</b> ..... 135 (Konkuk University, Korea)
028	Anomalous internal carotid artery as a cause of transient ischemic attack	<b>Ilung Kang</b> ..... 136 (Catholic University of Korea, Korea)
029	Pulsatility of middle cerebral arteries is better correlated with white matter hyperintensities than aortic stiffening	<b>Ju-Hun Lee</b> ..... 137 (Hallym University, Korea)
030	A case report of fibromuscular dysplasia in the posterior cerebral artery	<b>Min-Ju Cha</b> ..... 138 (Chungbuk National University, Korea)

### Poster Session 4

*Chair: Jaseong Koo (Department of Neurology, Catholic University of Korea, Korea)*

031	Neutrophil gelatinase-associated lipocalin as a biomarker in ischemic stroke	<b>Ji Hwa Kim</b> ..... 139 (Yonsei University, Korea)
032	Thyrotoxicosis-induced cerebral vasospasm in a patient with moyamoya syndrome	<b>Hyung Geun Oh</b> ..... 140 (Soonchunhyang University, Korea)
033	Recurrent transient global aphasia without hemiparesis caused by a dural arteriovenous fistula	<b>Hyung Geun Oh</b> ..... 141 (Soonchunhyang University, Korea)
034	Clinical characteristics according to histologically-confirmed thrombus composition in hyperacute ischemic stroke	<b>Kyu Sun Lee</b> ..... 142 (Ajou University, Korea)
035	Clinical and sonographical factors associated with lacunar and striatocapsular stroke progression	<b>Keon-Joo Lee</b> ..... 143 (Korea Centers for Disease Control & Prevention, Korea)
036	Effects of virtual reality exercise program on balance in cerebellar infarction patients	<b>Geun-Ho Lee</b> ..... 144 (Dankook University, Korea)



037	The effects of radial extracorporeal shock wave therapy for hemiplegic shoulder pain syndrome	<b>Byungju Ryu</b> ..... 145 (Sahmyook Medical Center, Korea)
038	Ultrasonographic findings in patients with hemiplegic shoulder pain	<b>Seung Nam Yang</b> ..... 148 (Korea University, Korea)
039	Assessment of the correlation of community mobility with quality of life and post-stroke depression: Using life-space assessment	<b>Soo Jin Kim</b> ..... 149 (Konkuk University, Korea)
040	Reliability and validity of Korean version of Life-Space Assessment (K-LSA) for assessing community mobility in stroke patients	<b>Soo Jin Kim</b> ..... 150 (Konkuk University, Korea)

## Poster Session 5

*Chair: Sung Bom Pyun (Department of Rehabilitation, Korea University, Korea)*

041	Factors associated with improvement or decline in cognitive function after ischemic stroke	<b>Sung-Hwa Ko</b> ..... 151 (Pusan National University, Korea)
042	Prism adaptation treatment for post stroke homonymous hemianopia : Case series report	<b>Bo-Ram Kim</b> ..... 153 (Konkuk University, Korea)
043	Effect of ESWT in knee flexor spasticity by applying sites in stroke patients: Muscle belly vs Myotendinous junction	<b>Min Kyung Shin</b> ..... 154 (Veterans Health Service Medical Center, Korea)
044	Evaluation of caregiving time and its association factors in severe brain injured patients	<b>Hyojae Kim</b> ..... 155 (Korean Armed Forces Capital Hospital, Korea)
045	The effect of whole body vibrator on the sitting balance in subacute stroke patients	<b>Sook Jung Lee</b> ..... 156 (Dong-A University, Korea)
046	Development of the computerized Stroop Color-Word Interference Test (ST-CWIT) for stroke patients	<b>Yeon Kang</b> ..... 157 (Bundang Jesaeng Hospital, Korea)
047	Balance training with robotic aid in multiple system atrophy patient: A case report	<b>Yeon Kang</b> ..... 159 (Bundang Jesaeng Hospital, Korea)
048	The effect of whole body vibrator on the lower extremity function in subacute stroke patients	<b>Sook Jung Lee</b> ..... 161 (Dong-A University, Korea)
049	Effect of tracheostomy on swallowing and voluntary cough function in patients with stroke	<b>Sook Jung Lee</b> ..... 162 (Dong-A University, Korea)
050	Functional status difference in left and right pure ischemic MCA infarction: 1 year follow-up study	<b>Sook Jung Lee</b> ..... 163 (Dong-A University, Korea)

## Poster Session 6

*Chair: Jay Chol Choi (Department of Neurology, Jeju National University, Korea)*

051	Submental ultrasonographic evaluation for dysphagia	<b>Yeon Kang</b> ..... 164 (Bundang Jesaeng Hospital, Korea)
052	Differences in maximal isometric strength and endurance of the tongue according to region in healthy adults	<b>Hyun Dong Kim</b> ..... 166 (Inje University, Korea)
053	The crossover impacts of aphasia or dysarthria in post-stroke patients with language problems	<b>David Min</b> ..... 167 (Kangwon National University, Korea)
054	The Korean version of Stroke Impact Scale 3.0(K-SIS 3.0) evaluation of reliability and validity	<b>Sung Uk Choi</b> ..... 168 (National Rehabilitation Center, Korea)

055	Clinical predictors of oro-esophageal tube feeding in patients with dysphagia	<b>Yoonmok Cheon</b> ..... 169 (University of Ulsan, Korea)
056	The usefulness of the reclining position on swallowing in neurogenic dysphagia : Case report	<b>Hyuna Yang</b> ..... 171 (Eulji General Hospital, Korea)
057	The effects of mirror therapy on central facial paresis in subacute stroke patients	<b>Jung-A Kang</b> ..... 172 (University of Ulsan, Korea)
058	Leukoaraiosis and functional outcome in patients with subcortical infarct	<b>Kyung Hee Do</b> ..... 174 (University of Ulsan, Korea)
059	The iScore, predictive tool for early neurologic deterioration during acute stroke stage	<b>Yohan Jung</b> ..... 175 (Changwon Fatima Hospital, Korea)
060	One-year vascular events according to antiplatelet regimens in non-cardioembolic ischemic stroke	<b>Sang-hwa Lee</b> ..... 176 (Seoul National University, Korea)

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*Chair: Jae-Kwan Cha (Department of Neurology, Dong-A University, Korea)*

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