

Dong-Eog Kim, M.D., Ph.D.

Professor of Neurology
Dongguk University Ilsan Hospital, Dongguk University College of Medicine

Education and Training

- 1987-1993 **M.D.**
Seoul National University Medical School, Seoul, Korea
- 1999-2005 **M.S. & Ph.D.** in Neuroscience
Seoul National University Graduate School

Professional Experiences

- 1993.3 – 1994.1 Intern, Seoul National University Hospital
- 1994.2 – 1997.4 Army Doctor, Korean Army Special Forces
- 1997.5 – 2001.2 Seoul National University Hospital
Resident in Neurology Department
- 2001.3 – 2002.5 Seoul National University Hospital
Clinical & Research Stroke Fellow in Neurology Department
- 2002.6 – 2005.5 MGH, Harvard Medical School
Center for Molecular Imaging Research (now, Center for Systems Biology)
Postdoctoral Research Fellow
- 2005.6 – 2016.8 Chief, Department of Neurology, Dongguk University Ilsan Hospital
- 2005.6 – present **Director, Molecular Imaging & Neurovascular Research Lab, Dongguk University College of Medicine**
- 2010.12 – present **Director, Korean Brain-MRI Data Center** (funded by KRISS)
- 2014.7 – 2016.8 RB (Member of Review Board in Neuroscience), National Research Foundation of Korea
- 2015.9 – present **PI, Global Research Lab for Thrombus-targeted Theranostics** (*with Pf. Nahrendorf @ Center for Systems Biology, Harvard Medical School*)
- 2017.6 – present **Associate Editor, Journal of Stroke**
- 2017.9 – present **Director, Biomedical Research Center, Dongguk University Ilsan Hospital**
- 2018.1 – present **Editorial Board, Molecules and Cells**

Award & Prize

Mordecai Globus New Investigator Award (American Stroke Association, 2002)

Best Medical Research Prize (Dongguk University College of Medicine, 2014)

Korean Presidential Prize (for a nationwide research on quantification of a large-scale brain MRI data of Korean stroke patients, 2015)

Distinguished Scholar Prize (Dongguk University College of Medicine, 2016)

Best Medical Research Prize (Dongguk University College of Medicine, 2018)

Selected Main Author Publications

1. Development and testing of thrombolytics in stroke. *Nikitin D ~ **Kim DE***. *J Stroke* 2021
2. Short-term cessation of dabigatran causes a paradoxical prothrombotic state. Kim J ~ **Kim DE**. *Ann Neurol* 2021
3. Pocket Anatomy of Cerebrovascular Imaging & Topography. Kim DE. World Scientific.
4. Effects of exercise training and detraining on atheromatous matrix metalloproteinase activity in mice. Kim J ~ **Kim DE**. *Atherosclerosis* 2020.
5. Which Factors Affect the Severity of Dysphagia in Lateral Medullary Infarction? Cho YJ ~ **Kim DE** & Park JW. *Dysphagia* 2020.
6. Dual-modal imaging-guided precise tracking of bioorthogonally labeled mesenchymal stem cells in mouse brain stroke. Lim S ~ **Kim DE** & Kim K (co-corrsponding author). *ACS Nano* 2019.
7. Spectroscopic assessment of gold nanoparticle biodistribution using surface plasmon resonance phenomena. Kim J ~ **Kim DE**. *ACS biomat Sci & Eng* 2019.
8. Supratentorial Cerebral Arterial Territories for Computed Tomograms: A Mapping Study in 1160 Large Artery Infarcts. **Kim DE**. *Scientific Reports* 2019.
9. Mapping the supratentorial cerebral arterial territories using 1160 large artery infarcts. **Kim DE** et al. *JAMA Neurol* 2019.
10. White matter hyperintensity load on stroke recurrence and mortality at 1 year after ischemic stroke. Ryu WS ~ **Kim DE**. *Neurology* 2019.
11. Estimation of Acute Infarct Volume with Reference Maps: A Simple Visual Tool for Decision Making in Thrombectomy Case. **Kim DE** et al. *J Stroke* 2019.
12. Hemispheric asymmetry of white matter hyperintensity in association with lacunar infarction. Ryu WS ~ **Kim DE**. *J Am Heart Assoc* 2018.
13. Increased Left Ventricular Filling Pressure and Arterial Occlusion in Stroke Related to Atrial Fibrillation. Ryu WS ~ **Kim DE**. *J Stroke Cerebrovasc Dis* 2018.
14. Quantitative imaging of cerebral thromboemboli in vivo: the effects of tissue plasminogen activator. **Kim DE** et al. *Stroke* 2017.

15. Principles and methods of molecular imaging in stroke. **Kim DE**. Chap. 70. *Primer on Cerebrovascular Diseases*, 2nd edition, 2017.
16. Cytokine response to diet and exercise affects atheromatous matrix metalloproteinase-2/9 activity in mice. Shon SM ~ **Kim DE**. *Circ J* 2017.
17. Stroke outcomes are worse with larger leukoaraiosis volumes. Ryu WS ~ **Kim DE**. *Brain* 2017.
18. Green-channel autofluorescence imaging: A novel and sensitive technique to delineate infarcts. Je KH ~ **Kim DE**. *J Neurosci Methods* 2017.
19. Direct thrombus imaging in stroke. Kim J ~ **Kim DE**. *J Stroke* 2016.
20. Combined near-infrared fluorescent imaging and micro-computed tomography for directly visualizing cerebral thromboemboli. **Kim DE** et al. *J Vis Exp* 2016.
21. Direct imaging of cerebral thromboemboli using computed tomography and fibrin-targeted gold nanoparticles. Kim JY ~ **Kim DE**. *Theranostics* 2015 (cover article).
22. Grading and interpretation of white matter hyperintensities using statistical maps. Ryu WS ~ **Kim DE**. *Stroke* 2014.
23. A new microCT-based high-resolution blood-brain barrier imaging technique to study ischemic stroke. Park JY ~ **Kim DE**. *Stroke* 2014.
24. Characterization of partial ligation-induced carotid atherosclerosis model using dual-modality molecular imaging in ApoE knock-out mice. Shin IJ ~ **Kim DE**. *PLoS One* 2013.
25. Photodynamic therapy using a protease-mediated theranostic agent reduces cathepsin-B activity in mouse atheromata in vivo. Shon SM ~ **Kim DE**. *Arterioscler Thromb Vasc Biol* 2013.
26. Hyperacute direct thrombus imaging using CT and gold nanoparticles. **Kim DE** et al. *Ann Neurol* 2013.
27. Hypoxia antagonizes glucose deprivation on interleukin 6 expression in an Akt Dependent, but HIF-1/2a independent manner. Choi SJ ~ **Kim DE** & Lee DK (co-corresponding author). *PLoS One* 2013.
28. Association between changes in lipid profiles and progression of symptomatic intracranial atherosclerotic stenosis: A prospective multi-center study. **Kim DE** et al. *Stroke* 2012.
29. Direct thrombus imaging as a means to control the variability of mouse embolic infarct models: the role of optical molecular imaging. **Kim DE** et al. *Stroke* 2011.
30. Exercise attenuates matrix metalloproteinase activity in preexisting atherosclerotic plaque. Shon SM ~ **Kim DE**. *Atherosclerosis* 2011.
31. Protease imaging of human atheromata captures molecular information of atherosclerosis, complementing anatomic imaging. **Kim DE** et al. *Arterioscler Thromb Vasc Biol* 2010.

Registered Patents

1. CT contrast medium for detecting thrombus, comprising fibrin-targeted peptide sequence-conjugated glycol chitosan-gold nanoparticles (U.S. Patent No. 9,717,807)
2. Pharmaceutical composition comprising statin-based drug and Wnt signal transduction regulator for preventing or treating arteriosclerosis and stroke (Korea Patent No. 10-1376338)
3. Iodine-containing radial-shape macromolecular compounds, preparation method thereof and contrast medium compositions for CT comprising the same (Korea Patent No. 10-1334780)
4. Measuring methods for thrombolysis and thrombolytic resistance customized to individual patients (Korea Patent No. 10-1317215)
5. Method of Fluorescent thrombus imaging-based prediction of infarct volume in a stroke model (Korea Patent No. 10-1294351)
6. CT contrast agent comprising glycol chitosan-gold nanoparticle conjugated fibrin target peptide sequence (Korea Patent No. 10-1474063)
7. Chart for reference standards for cerebral white matter hyperintensities (U.S. Design Patent No. US D725,791 S)
8. Method and system for clinical efficacy evaluation of artificial intelligence based medical device (Korea Patent No. 10-1740464)
9. System for quantitative analysis based on brain magnetic resonance imaging (Korea Patent No. 10-1203047)
10. Pharmaceutical Composition Comprising Dexamethasone and Glibenclamide for Prevention or Treatment of Stroke (Korea Patent No. 10-1768809)
11. Radial shape of polymer compound containing iodine, preparation method thereof, and CT contrast medium composition containing same (European Patent No. EP 2 604 289 B1; China Patent No. ZL201180049142.1)